MINNESOTA MEDICINE

Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

Volume 24 **November, 1941** **No. 11**

THE ROLE OF TONSILS AND ADENOIDS IN RESPIRATORY INFECTIONS IN CHILDREN*

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RESPIRATORY infections in infants and in children comprise the most common group of illnesses for that age group. Statistical evidence points to a lowered mortality and morbidity rate from these diseases during the last ten years but no specific measures have been developed that assure reasonably certain control of these common infections. Though the common respiratory infections termed colds, sore throat or tonsillitis, laryngitis, bronchitis and pneumonia represent the usual manifestations in infants and in children, such complaints as otitis media, cervical adenitis and sinusitis must be considered as a part of or as sequelæ of respiratory infections.

Before assigning to respiratory infections any causative or influencing factors certain data pertaining to these infections must be recognized. Though children at all ages may contract any of the respiratory infections it has been demonstrated that all of these infections are most prevalent in the age grouping of three to seven years. It is also certain that geographical location and climatic advantages influence the occurrence of these complaints. These accepted facts must not be lost sight of when any single factor is considered that might influence the incidence or course of these respiratory infections in children.

Definite progress has been made in the control of respiratory infections. Advances in the science of nutrition, particularly with reference to vitamin and mineral needs, have played a part in developing resistance to respiratory infections. Epidemiological studies leading to a more intelligent handling of children have aided in this control. To immunological studies and recently to chemotherapy can be ascribed significant gains in the management of these common infections. For at least two decades there has been a strong conviction among the medical profession and in lay groups that the tonsils and the adenoids play a significant part in predisposing to or in prolonging these common infections in children. This belief accounts for an attitude to the tonsils and adenoids which may or may not be justified. It is important, therefore, to study this supposed contributing factor to determine if possible the rôle of the tonsils and adenoids in respiratory infections.

It is a logical assumption that the tonsils and adenoids are involved in upper respiratory infections and that infections reaching the larynx, the trachea, and the lungs may likewise involve the lymphoid tissue of the nasopharynx. The problem is to decide whether this relationship is one that encourages these infections or is detrimental to their development. A solution of the problem would direct the course that should be taken in the treatment of the tonsils and adenoids for the prevention and treatment of the type of infections under discussion.

Interest in the surgical treatment of the tonsils and adenoids increased when it was clearly demonstrated that marked hypertrophy of this lymphoid tissue interfered with normal and comfortable breathing. The removal of these organs brought about prompt relief and seemed to improve the general health of the treated children. With the improvement in surgical technique, more certain control of hemorrhage and safer anesthesia the removal of the tonsils and ade-

*Read at the annual meeting of the Minnesota State Medical Association, Saint Paul, Minnesota, May 28, 1941.

noids was suggested for reasons other than hypertrophy. Clinicians maintained that infection in the tonsils and adenoids could be present without evidence of hypertrophy. The reported beneficial results following tonsillectomy in selected cases with obvious infection stimulated similar treatment where the evidence of infection was not clear. Then followed an attitude of condemnation of the tonsils and adenoids in the school child as a possible predisposing factor in any of the infections of the oral cavities and the respiratory tract. In fact some fifteen years ago statements were made by observers that the tonsils and adenoids could serve no useful purpose and were quite likely to be a liability to any child. It was argued that infections of the nasopharynx and the respiratory tract were encouraged by the presence of the tonsils and adenoids and conversely that their absence reduced the incidence of such infections. If clinical experience based on sound observations had corroborated these reports there would be no need for this discussion today. It developed, however, that respiratory infections did occur frequently in children whose tonsils and adenoids were removed at various ages. From these conflicting reports the query naturally arose, Just what is the rôle of these lymphoid structures in respiratory infections? Seeking aid in the solution of this query a study was undertaken to look for some convincing evidence that might guide the physician in his attitude toward the tonsils and adenoids.

Mindful of the fact that no scientific evidence is at hand to explain the part the tonsillar tissue plays in the economy of the child, it became necessary to follow the development of a group of children to adolescence, recording the sequence and the number of their respiratory infections over a period of years. It was possible to follow a group of 4,400 children for a period of ten years, half of whom had had their tonsils and adenoids removed and the other half had not. The initial examination and the observation of these children began when they were between the ages of four and seven years and continued into their high school period. At the time of their initial examination the indications for tonsillectomy were numerous but in general about the same for the entire group of children. For various reasons only one-half of the total group (4,400) submitted to the operation so the unoperated children served as controls. The incidence and the trend of a particular type of infection was noted in each child whether in the operated or in the unoperated group.

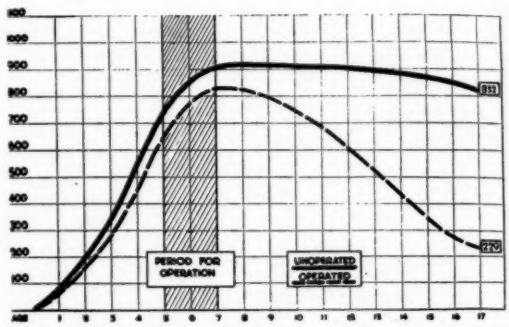

Chart 1. Tonsillitis and sore throat among 2,200 tonsillectomized and 2,200 non-tonsillectomized children.

Tonsillitis.—From these studies it was noted that tonsillitis was a common complaint in young children. Approximately 38 per cent of the 4,400 children utilized were subject to repeated attacks of tonsillitis (at least two febrile attacks a year) during the first seven years of life. As is indicated in Chart 1, the incidence of sore throat was decidedly lessened during the ten-year period. In the group in which the operation was not done, attacks of tonsillitis recurred with only a slight decrease in frequency during the same years. When one compares the incidence of this infection in the two groups it is obvious that the common ailment termed tonsillitis or sore throat occurred less frequently in the cases in which the tonsils had been removed. In other studies, notably those of Selkirk and Mitchell,[8] similar results were obtained as far as this complaint was concerned.

Common Cold.—The common cold (four colds or more a year) occurred with about equal frequency in the two groups under observation (Chart 2). Approximately 42 per cent of the children were subject to this repeated infection up to the age of seven years. Over the ten-year period the children who were operated on showed only a slight advantage over the children who were not, an advantage which cannot be considered statistically significant. It is quite likely that the removal of the adenoids benefited the younger children but as the children ad-

vanced in years the adenoid tissue retrograded, so that the children who were not operated on were likewise benefited. Though the trend as far as frequent colds are concerned is downward as the child increases in age, there is insufficient evidence to show that the rôle of the tonsils is a significant one in either predisposing or preventing this common infection. Adenoids, especally if they are obstructive, do play a significant part in predisposing to colds in young children but less so in older children.

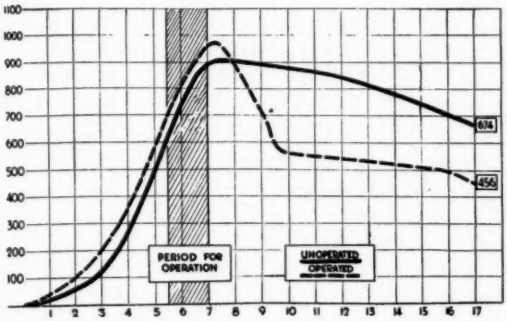

Chart 2. Colds (four or more a year) among 2,200 tonsillectomized and 2,200 non-tonsillectomized children.

Otitis Media.—Otitis media may exist independent of a respiratory infection but in many instances it occurs coincident or as a sequela of other oral infections. Only purulent otitis media was considered in a study of this infection. It was noted that 15 per cent of the children who were subsequently operated on had suffered from purulent otitis media before the ages of from five to seven years, while in the control group 12 per cent were likewise affected. During the three-year period following the tonsil and adenoid operation the incidence of otitis media was considerably lower in the operated group than in the unoperated children. It seems likely that the removal of the adenoids was responsible for this advantage for during the next seven years the unoperated children fared as well and even a little better than those who were operated on. The age factor must be considered in evaluating the rôle of the tonsils and adenoids in this infection for regardless of the presence or absence of the tonsils this type of infection becomes less frequent after the eighth year of life. From these observations one can conclude that the tonsils play an insignificant rôle in the production of otitis media but that the adenoids may influence the incidence of this infection in children between three and eight years of age (Chart 3).

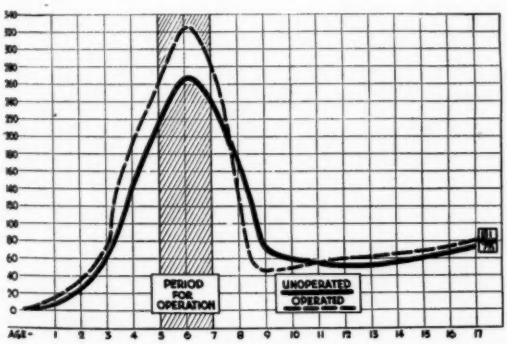

Chart 3. Otitis media (purulent) among 2,200 tonsillectomized and 2,200 non-tonsillectomized children.

Cervical Adenitis.—Cervical adenitis in children is usually secondary to a nasopharyngeal infection. It was noted that in each group, operated and control, 15 per cent of the children had definite enlargement of the cervical glands before the ages of five to seven years. Only children in whom there was a visible enlargement of the cervical glands have been considered. During the three-year period following tonsillectomy the incidence of cervical adenitis in the children who were operated on was 5 per cent as compared to an incidence of 14 per cent in the children who were not. Over a longer period of time a number of the tonsillectomized group showed a recurrence of cervical adenitis, accounting for an incidence of 7 per cent at the end of ten years,

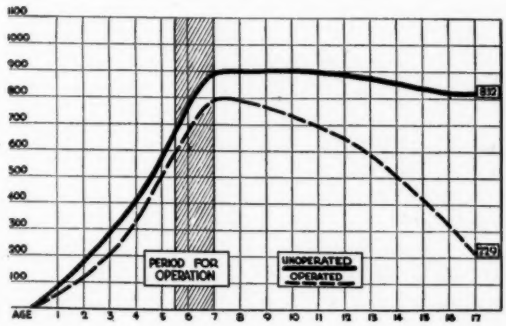

Chart 4. Cervical adenitis (acute and chronic) among 2,200 tonsillectomized and 2,200 non-tonsillectomized children.

while among the children used as controls the incidence of this complaint was 14 per cent. The statistical evidence in this study as well as in other reported studies shows a significant favorable trend for the relief of this complaint in the groups in which a tonsillectomy had been done (Chart 4).

Sinusitis and Nasal Allergy.—Children with acute sinusitis, nasal allergy and allergic involvement of the sinuses are not favorably influenced by tonsillectomy. These conditions develop with equal frequency in children whose tonsils and adenoids have been removed in early childhood and in untreated children. The surgical removal of the tonsils and adenoids rarely benefits this condition. Observations made by Bullen[1] and recently by Hansel and Chang[2] indicate that the rôle of the tonsils and adenoids is not an important one in the causation and treatment of these manifestations.

Laryngitis.—Recurrent laryngitis occurred in 3 per cent of the children before the operation and in 5 per cent of the children in the control group over the same period of time. For the three-year period following tonsillectomy the incidence was not changed in either group. At the end of the ten-year follow-up period, 8 per cent of the children operated on were subject to recurrent attacks of laryngitis, while 10 per cent of the children used as controls were similarly affected. There is no obvious change in the incidence of this infection after the removal of the tonsils and adenoids and it would seem that the rôle of the tonsils and adenoids is not an important one in the occurrence of this infection.

Bronchitis and Pneumonia.—In the case of upper respiratory infections the tonsils and adenoids are usually involved if they are present. In pulmonary infections these lymphoid structures may or may not be involved depending upon whether the pulmonary infection is primary or secondary to an upper respiratory infection. It is of interest, however, to discover, if possible, whether bronchitis and pneumonia occur less frequently or more frequently after the tonsils and adenoids have been removed. In analyzing the two groups it was found that pulmonary infections occurred more frequently in children during the first five years of life than in the next ten years. Such is the usual incidence of these infections. Undoubtedly some children subject to pulmonary infections are operated on because of this tendency, for more of the children who underwent the operation had repeated

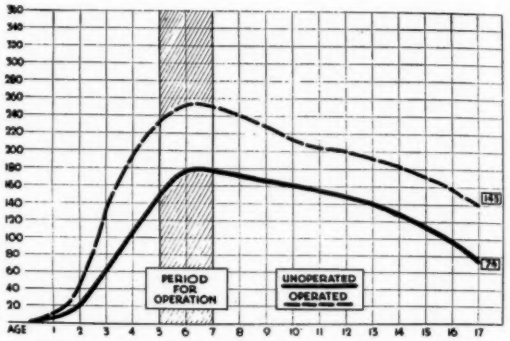

Chart 5. Pulmonary infections (bronchitis and pneumonia) among 2,200 tonsillectomized and 2,200 non-tonsillectomized children.

attacks of bronchitis and pneumonia before the ages of five and seven years than in the group of children who were never operated on. In spite of this, the trend was definitely for more pulmonary infections in the tonsillectomized group over the ten-year period than for the control children (Chart 5).

It seems that the absence of the tonsils either increased the chances of developing bronchitis and pneumonia or else the tonsillectomized group represented the more susceptible individuals and the operation was not responsible for the increased incidence of pulmonary infection. There seems to be no evidence to show that the tonsils and adenoids predispose the child to a pulmonary infection. There is suggestive evidence that the absence of the tonsils may encourage pulmonary involvement due to the fact that the soil in which bacteria might develop has been removed in the oral cavity.

When one reviews the statistical data dealing with the various infections it is quite evident that one can only talk about trends rather than what happens in an individual case. From clinical experience it is well known that the tonsils and adenoids play a very significant rôle in predisposing to respiratory infections but can one deduce from these isolated results that the rôle of the tonsils is the same in all children. If it were so the trends brought out by these statistical studies would be much more favorable for the

operated group than our analysis shows. It can be assumed, however, that a favorable trend for a given infection in either group denotes the rôle the presence or the absence of the tonsils play in the incidence of that infection. With that interpretation of the results it is clear that the tonsils and adenoids do play a significant rôle in the incidence of the upper respiratory infections while in the case of pulmonary infections the presence of the tonsils does not increase the incidence of bronchitis and pneumonia.

Recent advances in the treatment of respiratory infections may alter our opinion as to the significance of the tonsils and adenoids in these infections. The improved dietary factors which are now assured a large percentage of the children and the general use of sera and effective drugs in the treatment of respiratory infections have brought about a favorable effect on the morbidity and the mortality in these infections. The incidence and severity of respiratory infections has been shown to be less in adequately fed children than in children with known deficiencies in diet. The use of anti-pneumococcus serum and such drugs as sulfapyridine and sulfathiazole have materially reduced the mortality of pneumonia in children. Consequently, the rôle of the tonsils and adenoids appears to be less important than during the period when no specific remedies were available. The control of the respiratory infections cannot be considered accomplished, however, unless measures are developed that assure some degree of protection against the infection. It is in the field of prevention that the tonsils and adenoids may play an important rôle. One can, therefore, interpret the findings in this study as of significance in reducing the incidence of upper respiratory infections even though their removal does not tend toward a lower incidence of pulmonary infections.

Discussion

After making due allowance for the various procedures that are known to influence the incidence and the treatment of respiratory infections in children the evidence gathered from this study does indicate that there is a relationship between the tonsils and adenoids and respiratory infections. If one separates these manifestations into upper and lower respiratory infections it is clear that removal of the tonsils and adenoids favorably influences occurrence of upper respiratory infections and does not favorably influence that of the lower or pulmonary infections. It is probable that the presence of the tonsils may even act as a safeguard against pulmonary infection inasmuch as the unoperated children showed somewhat less incidence of bronchitis and pneumonia. The measurable benefits of tonsillectomy and adenoidectomy to the children who have been subject to tonsillitis, colds, otitis media and cervical adenitis, justify the operation in these children and is a desirable procedure. The benefits, however, though striking in the case of tonsillitis and cervical adenitis, are not great enough to advocate a prophylactic tonsillectomy in children with the idea of reducing the incidence of respiratory infections. The statistical evidence agrees with the general clinical experience that certain types of upper respiratory manifestations can be reduced if the tonsils and adenoids are removed but other manifestations may actually occur more frequently following the operation. The type of respiratory complaint to which the child is most susceptible must determine whether the tonsils or the adenoids are likely to be a liability to the child. From clinical experience and from a study of the statistical evidence some idea is obtained as to the rôle of the tonsils and adenoids in the case of a specific complaint. Where the rôle of the tonsils and adenoids appears to be favorable to the production of clinical symptoms the surgical removal of the tonsils is advocated.

Conclusions

The tonsils undoubtedly are responsible for many upper respiratory infections especially in children subject to tonsillitis and to cervical adenitis and can be considered as playing an important rôle in these infections. Tonsillectomy is desirable in such children.

The adenoids appear to be a causative factor in some children who develop frequent colds and middle ear infections. In the age period of three to seven years the adenoid structures are particularly a menace to many children and their removal does assure some protection against similar recurrent attacks. Adenoidectomy is advised in such children either alone or along with a tonsillectomy.

For the relief and protection against sinusitis and nasal allergy no statistical evidence is avail-

able to justify any protection by either the removal of the tonsils or adenoids or both organs. In the production of these clinical manifestations the tonsils and adenoids seem not to play any significant part.

Evidence obtained in this study does not support the opinion that laryngitis, bronchitis and pneumonia can be reduced in incidence by removing the tonsils and adenoids. It appears that laryngeal, bronchial and pulmonary infections are not dependent upon the presence or absence of the tonsils and that these lymphoid structures do not play a significant rôle in lower respiratory diseases.

Improved hygienic and dietary measures along with successful specific therapy in pulmonary diseases have brought about a condition which justifies the statement that is now generally accepted that the rôle of the tonsils and adenoids in the average child is not as important today in the control of respiratory infections as was thought to be the case a decade or two ago.

16 N. Goodman St.

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APPARENT SPREAD OF POLIOMYELITIS THROUGH FOUR FAMILIES*

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OF RECENT years there has seemed to be a tendency for some individuals in authoritative positions to deny the possession of any knowledge concerning the mode of transmission of poliomyelitis. This is somewhat surprising in view of the brilliance of the minds which have been devoted to this problem since the turn of the century, but it makes it imperative, nevertheless, that the entire subject be reviewed in a critical manner. It behooves those who possess pertinent data, therefore—data which have not been presented heretofore because of the belief that the matter was largely settled and that such presentation would not contribute materially to the problem—to make available this information so that it may at least be added to the evidence already presented and be taken into consideration in the critical re-appraisal. For these reasons, it may perhaps not seem too inappropriate to present data ten years old.

There are one or two aspects of the investigation of the poliomyelitis outbreak in Minnesota in 1930 which, perhaps, make it of somewhat more value than would otherwise be the case. The advantages of making epidemiological investigations in rural areas is well known, and this outbreak occurred in a very rural area. The cases were confined chiefly to the southwestern corner of the state, an area in which there are no large cities and in which, for the most part, people live on isolated farms considerably separated from one another. This isolation was even more complete in 1930 than it is today. Although automobiles were in wide use, they were not used to the extent that they are now, and there was less mingling of farmers' families with others in the vicinity. There were no paved roads in southwestern Minnesota at that time, and only the main highways were even gravelled. As a result of these factors, a visit or a visitor was a red letter event for the farmer's family, and the names of the visitors, places visited, and dates, usually could be given accurately.

There is one other factor involved in the investigation of this particular outbreak which probably should be mentioned, merely because it, too, has some bearing on the reliability of the data. This is that it was my first assignment in public health work. I accepted the task, therefore, with some trepidation, but at least with no preconceived ideas as to the epidemiology of poliomyelitis and with great zeal born of my desire to make good.

Another point of some importance is that essentially all of the investigation was conducted by one person. There were no county or district

*Presented before the Society for the Study of Mass Medicine, December 16, 1940.

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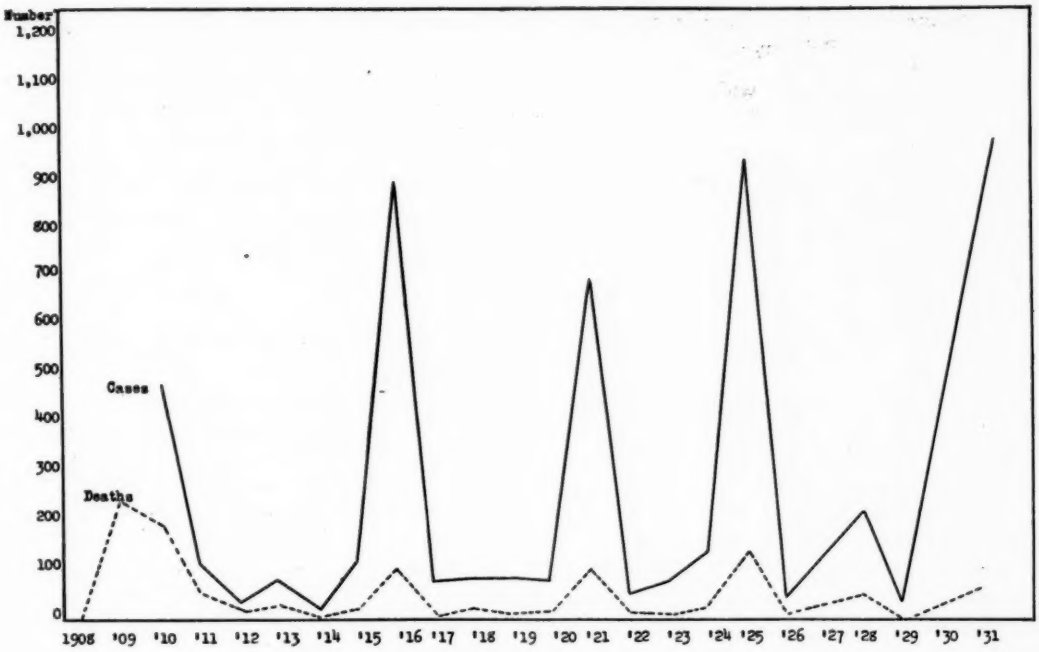

Fig. 1. Poliomyelitis—reported cases and deaths in Minnesota, 1908-1931.

health officers. Theoretically, all townships were supposed to have health officers but in very few of them had such appointments actually been made. Only in the larger villages had physicians been appointed to act as part-time health officers. Essentially all of the investigating that was done was therefore conducted by me, and I spent practically the entire summer of 1930 in southwestern Minnesota for this sole purpose. Of the 166 cases reported in this area up to September first, 155 were investigated by me personally. The central office kept me informed of cases by phone or wire as they were reported and I was free to investigate as thoroughly as I could, being limited only by my own industry and the number of hours in a day.

This report, then, is a very earthy one coming under the classification of "sole leather" epidemiology; or more correctly, in this instance, "flivver" epidemiology.

Before proceeding further, it may be well to give a few definitions. Three types of cases will be considered: (1) paralyzed cases: cases with demonstrated paralysis or weakness of muscle groups; (2) non-paralyzed cases: cases with the usual systemic symptoms, with findings indicating central nervous system involvement (such as resistance to anterior flexion of the neck and back, or an abnormal increase in the cell count of the spinal fluid), but without any demonstrated paralysis; and (3) suspicious cases: cases of illness in households in which paralyzed or non-paralyzed cases of poliomyelitis had occurred, and with symptoms similar to the systemic symptoms of poliomyelitis, but with no evidence of involvement of the nervous system. I have purposely avoided the use of the term "abortive" since sometimes it is used to refer to cases I have designated as "non-paralyzed," and sometimes to cases I have designated as "suspicious." If the term "poliomyelitis" is used without further modification it refers to "paralyzed" and "non-paralyzed" cases combined, but exclusive of "suspicious" cases.

By "southwestern" Minnesota I refer to the twelve counties in the extreme southwestern corner of the state, four across and three deep. The most southern tier of this group, from west to east, are Rock, Nobles, Jackson, and Martin Counties. The middle tier, in corresponding order, are Pipestone, Murray, Cottonwood, and Watonwan Counties, and the northern tier, Lincoln, Lyon, Redwood and Brown Counties.

Minnesota's Prior Experience With Poliomyelitis

Minnesota's experience with poliomyelitis prior to 1930 is indicated in Figure 1. It is evident from this figure that Minnesota had experienced an epidemic of poliomyelitis roughly every four to six years since 1909. The largest epidemic of all probably occurred in 1909, judging by the number of deaths (234, resulting in a mortality rate of 11.47 deaths per 100,000 population). The last large epidemic prior to 1930 occurred in 1925, and it is probably significant that southwestern Minnesota was spared to a large extent in this epidemic, with only 43 of the 941 cases occurring in this area. It has been a common observation in Minnesota that the same area is not heavily attacked in two successive epidemics. During the four years, 1926 to 1929 inclusive, only 18 cases of poliomyelitis were reported from southwestern Minnesota. In 1930, however, 222 cases were reported in this area, accounting for almost half of the 480 cases reported in the state as a whole that year.

General Characteristics of the 1930 Epidemic

The 1930 poliomyelitis outbreak was a perfectly typical one, although it proved to be just a preliminary increase in case incidence which went on to an even more extensive epidemic the following year, as indicated in Figure 1. The 480 cases amount to a morbidity rate of 18.7 per 100,000 population. Thirty-seven poliomyelitis deaths were reported that year, giving a case fatality rate of 7.7 per cent, or a mortality rate of 1.25 per 100,000 population. The usual predominance of cases among males occurred with a ratio of male to female cases of 1.46. As to the age distribution, 24 per cent of the cases occurred in individuals under five years of age.

Development of the Epidemic in Southwestern Minnesota

Considering the epidemic only from the standpoint of southwestern Minnesota, the earliest case I was able to discover had onset on April 8 and occurred in a child in Worthington, Nobles County, a city of about 4,000 population. Worthington is considered the focus of the epidemic, although two cases with onsets April 10 and 12 occurred in Bloom and Wilmont Township, respectively, about fifteen miles from Worthington, and with no ascertainable connections, so that it is difficult to state exactly where the epidemic actually started. However, the persistence and high incidence of the infection in Worthington, together with the important rôle this city plays in the social and economic life of Nobles County and beyond, further justifies considering this city as the primary focus.

The Division of Preventable Diseases did not know of any cases of poliomyelitis in this vicinity until after the first of June, and yet definite clear-cut cases were discovered with onsets going back to the early part of April. When I saw the first cases upon my arrival, and told the physician that I was positive they were cases of poliomyelitis, he remarked, "Well, if this is poliomyelitis, I've seen lots of others!", and proceeded to give me names of other patients seen by him in the recent past which, upon investigation and examination, left no doubt that they, too, actually were cases of the disease. A similar experience was encountered in each new community from which poliomyelitis was reported. The first cases reported were usually very severely paralyzed patients, and the physicians would not feel too sure that even they were cases of poliomyelitis. As the physicians became aware of the presence of the disease in their community, however, they improved in their diagnoses, progressively diagnosing cases as poliomyelitis with less and less severe degrees of paralysis.

Radial Spread

I had never heard at the time of the radial spread of poliomyelitis, but this well demonstrated characteristic of the disease, so difficult to explain other than by transmission through person-to-person contact, became very evident. At first my work was confined entirely to the Worthington area, and then I began to describe a wider and wider arc in visiting new cases reported, at the same time visiting fewer and fewer cases in the area of the original focus. Toward the end of the summer I found myself covering about two hundred miles a day to keep up with the new cases appearing on the ever-widening periphery of the outbreak, and felt very much like the end man in a game of "crack-the-whip."

This radial spread is evident from Figure 2,

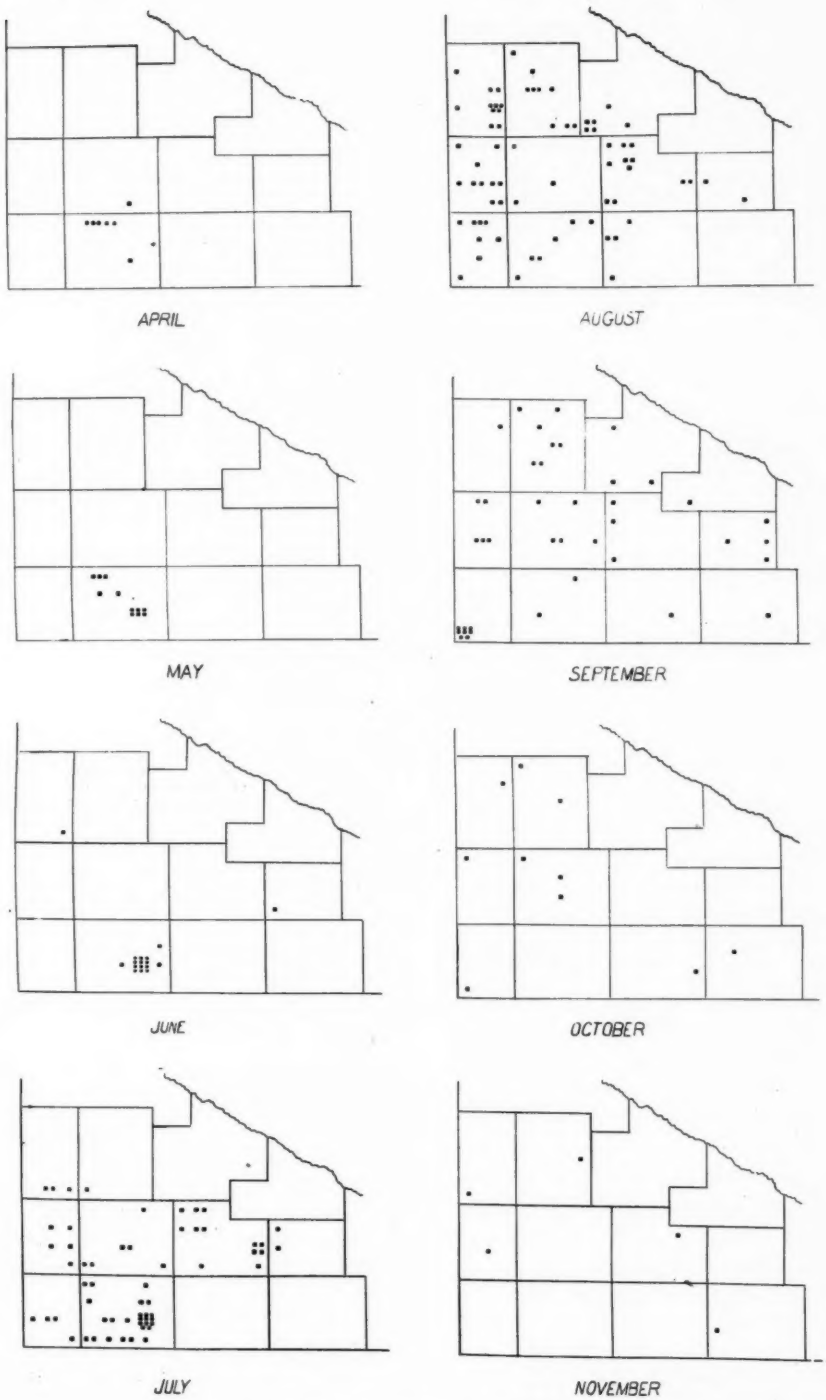

Fig. 2. Poliomyelitis cases by month of onset, southwestern Minnesota, 1930.

TABLE I. REPORTED CASES OF POLIOMYELITIS IN MINNESOTA IN 1930
(According to month of onset and area)

Month	Number of Cases Reported From:					Rate per 100,000 Population†				
	Worthington	Southwestern Minnesota			Minnesota exclusive of Southwestern Minnesota	Worthington	Southwestern Minnesota			Minnesota exclusive of Southwestern Minnesota
		Zone I*	Zone II	Zone III			Zone I*	Zone II	Zone III	
Jan.					1					
Feb.					2					0.1
Mar.					2					0.1
Apr.	1	6	1			25.8	32.2	1.5		
May	6	11			1	154.7	59.1			
June	11	16	1	2		283.7	85.9	1.5	1.8	
July	10	26	27	6	4	257.9	139.6	39.9	5.5	0.2
August		6	36	28	36		32.2	53.1	25.5	1.5
Sept.		2	22	17	60		10.7	32.5	15.5	2.5
Oct.			6	4	102			8.9	3.6	4.3
Nov.			2	3	36			3.0	2.7	1.5
Dec.					14					0.6
Total	28	67*	95	60	258	722.1	359.7*	140.4	54.6	10.8

*Including Worthington cases.

†1930 populations: Worthington 3,878
Zone I 18,618
Zone II 67,747
Zone III 109,880
State, excl. of S. W. Minnesota..2,367,708

and also may be shown by the usual device of dividing the area into concentric zones and comparing the waxing and waning of cases in the various zones. This may be done in this instance by dividing southwestern Minnesota into three zones, with Nobles County serving as Zone I, the counties immediately adjacent to Nobles County serving as Zone II, and the counties adjacent to them in turn serving as Zone III, as indicated in Figure 3.

The cases, according to onset by months, reported from Worthington from each of the three zones, and from the state exclusive of southwestern Minnesota, are presented in Table I.

These data are presented graphically in Figures 4 and 5. From Figure 4 it may be seen that through July southwestern Minnesota accounted for essentially all of the cases. However, the cases in this area reached their peak in August and rapidly declined, while the epidemic for the state as a whole didn't reach its peak until October.

Figure 5 clearly depicts the wave-like spread from the primary focus, and the decrease in amplitude of the wave (morbidity rate) as it rolled outward.

For comparison with a disease in which respiratory spread is unquestioned, Figure 6 is presented giving Syracuse measles morbidity rates in 1927 for the months of epidemic prevalence by census tracts, with the tracts grouped into concentric zones. Zone I is the area of the city in which measles first appeared. The 1927 figures were selected because the data happened to be readily accessible and the fact that only one focus seemed to be involved throughout that year. Occasionally, in other years, additional foci have appeared later in the epidemic and the collision of waves spreading radially from these multiple foci result in a confusing picture when morbidity

rates are calculated by zones for the city as a whole. It will also be noted the measles cases are by date of report rather than by date of onset, but since the lag between onset and report was undoubtedly uniform this should not make any difference in the pattern. The rough similarity of Figures 5 and 6 is evident.

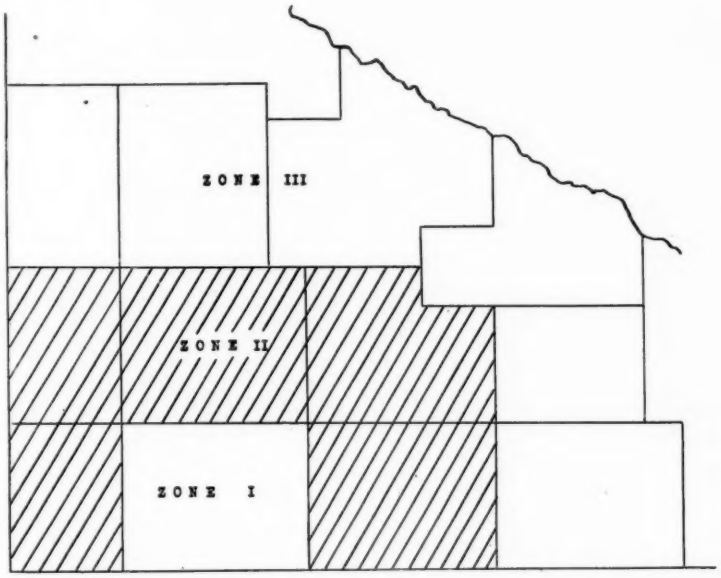

Fig. 3. Division of southwestern Minnesota into zones for statistical purposes.

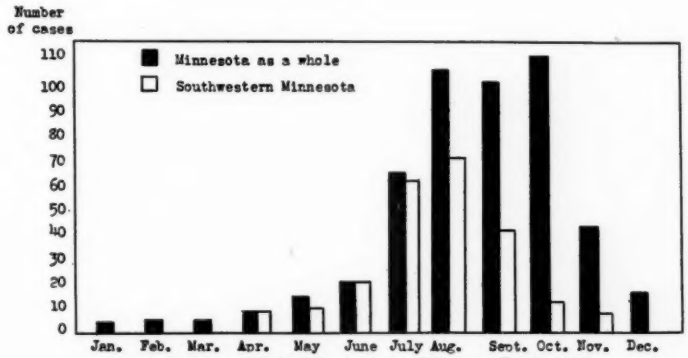

Fig. 4. Poliomyelitis in Minnesota in 1930, according to onset.

Direct Evidence of Spread Through Contact

As stated previously, I investigated 155 of the 166 cases occurring in southwestern Minnesota up to September 1. I also investigated 11 other cases elsewhere in the state, and the remainder of the paper will be devoted to some of the findings in my investigation of these 166 cases.

Investigation included a clinical history and physical examination of each patient diagnosed poliomyelitis, a detailed history as to activities and contacts during the period extending back thirty days prior to first symptoms in the earliest case, and a complete household roster with a history of any illness in other members of the household. Whenever possible, physical examinations were made as well of household members giving a history of a suspicious illness.

Soon after the investigation was started it became perfectly apparent that there were all gradations of illness. So far as involvement of the nervous system was concerned, cases ranged from fatally paralyzed cases, on through cases with but a mild temporary weakness of one or two muscle groups, to cases in which the patient merely complained of pain upon anterior flexion of the neck. In addition, many individuals were found to suffer from general systemic symptoms similar to those in the definite cases, but with no apparent involvement of the nervous system. These latter cases were usually self-designated as "summer flu," or "stomach flu." It was interesting to note that as poliomyelitis appeared in new communities the physicians reported a concurrent wave of "summer flu."

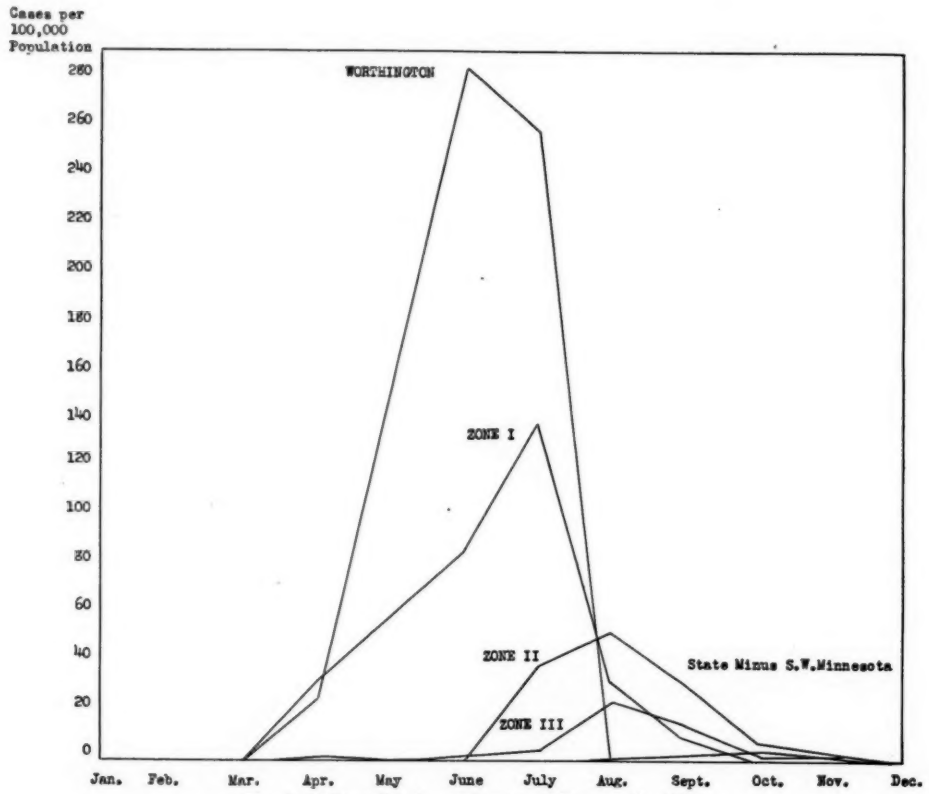

Fig. 5. Poliomyelitis in southwestern Minnesota in 1930.

The usual story from a mother in a family with a number of children in which poliomyelitis appeared was somewhat as follows: "Mary was ill for a couple of days; didn't want to play, complained of a headache, threw up once, and she seemed to be running a little fever. A few days after she got well, Johnny became sick the same way and we thought that he, too, merely had 'summer flu.' A couple of days later, however, he fell when he got up to go to the bathroom. We thought that he had just tripped on the rug, but later the same day, when he again got out of bed, he fell to the floor and couldn't get up. Then we saw he couldn't use one leg the way he should, so we called Dr. Smith and he said it was infantile paralysis." It seemed difficult to believe that the illnesses associated so frequently in households with paralyzed and non-paralyzed cases were not of the same etiology, and when it was assumed that they *were* manifestations of infection with poliomyelitis virus, a definite connection of one paralyzed case with a prior case could frequently be traced. Even considering only paralyzed and non-paralyzed cases, in fifty-three of the 166 cases investigated, or 32 per

cent, a history was secured of exposure within thirty days prior to onset to another acute paralyzed or non-paralyzed case.

There were several experiences which were so striking that they left little doubt in my mind that personal contact was an important factor in the usual spread of the disease. One was the investigation of a case of poliomyelitis occurring in a University of Minnesota student. This young man was the only University student to develop poliomyelitis in 1930. Investigation revealed that on Decoration Day, May 30, he attended a family reunion in a village half-way between Minneapolis and Worthington. This reunion was also attended by this young man's three-year-old nephew from Worthington, where the epidemic of poliomyelitis was already well under way. On that day, the nephew had first symptoms of what ultimately proved to be a typical case of paralytic poliomyelitis. The student was particularly fond of this nephew and played with him throughout the day. He then returned to Minneapolis and became ill June 12, developing a deltoid muscle paralysis.

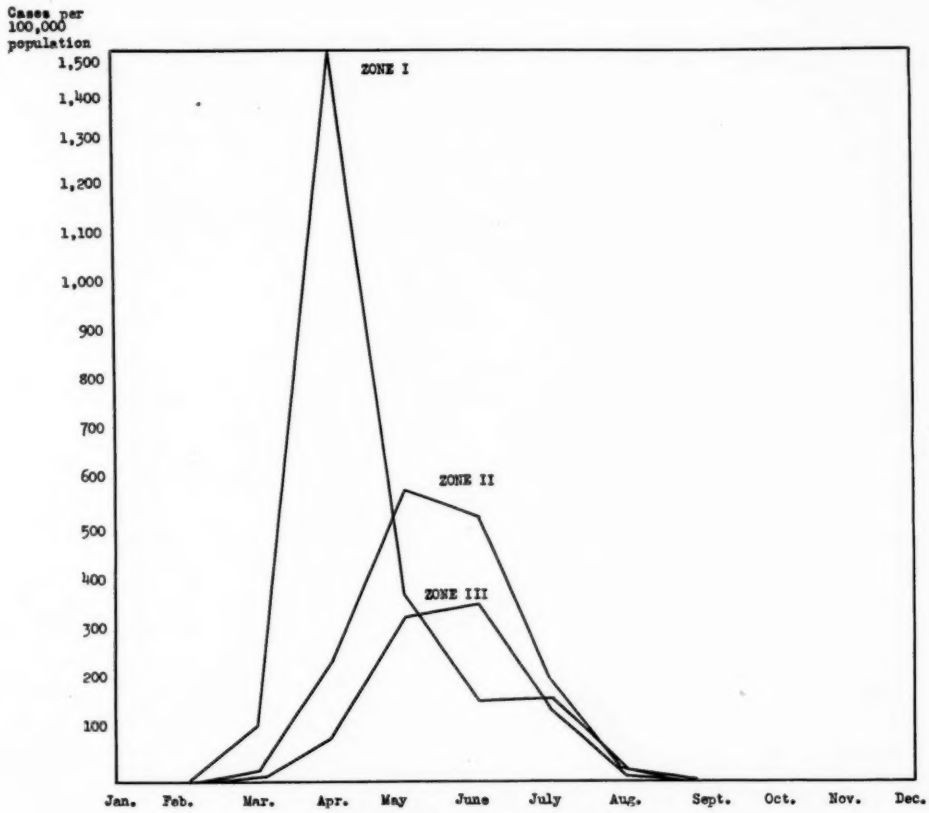

Fig. 6. Measles in Syracuse in 1927.

Another instance was the occurrence of paralyzed and suspicious illnesses among four related families (Fig. 7). The Ed L., Pete L. and K. families all had farms in Murray County, Moulton Township. The farms were not far apart and the families frequently visited back and forth. The first case to appear was in C. L., a typical paralyzed case with onset July 3. Her brother, J. L., also developed a typical case of paralytic poliomyelitis with onset July 17. Her older sister, Mrs. K., became ill with a suspicious illness about July 17, and Mrs. K.'s daughter, E., developed a typical case of paralytic poliomyelitis with onset July 21. About this same time, M. L., of the Pete L. family, and her guest, N. DeG., both developed suspicious illnesses. N. DeG. re-

turned to her home in the adjacent county on July 24, and on July 29 all three of her siblings became ill, with her brother, H. DeG., developing a typical case of paralytic poliomyelitis.

A third instance was the apparent spread of

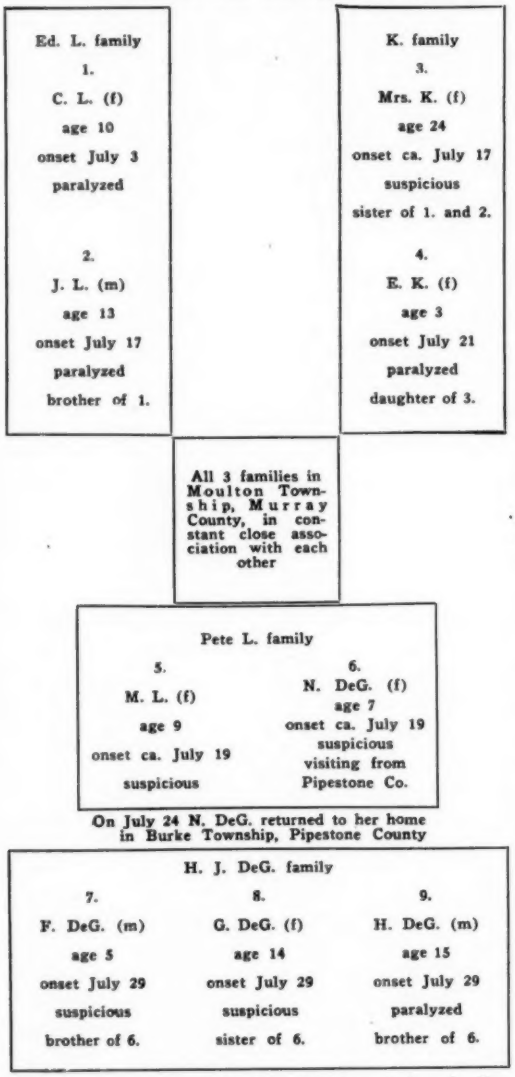

Fig. 7. Apparent spread of poliomyelitis through four families.

poliomyelitis from a county in the western part of Zone II of southwestern Minnesota to a county beyond the northern part of Zone III. The actual working out of the associations involved in this series was fascinating. Prior to the reporting of poliomyelitis in twins (males, aged nineteen months) from Osceola Township, Renville County, essentially all of the cases had been confined to southwestern Minnesota. These two cases, however, were distinctly beyond the focus of that time. In spite of questioning and cross-examining, I could not shake the mother from her assertion that the twins had not been away from the community at any time during the entire summer and that they had had no visitors. I recalled, however, that in a prior investigation of cases in a family in the village of Holland (in the focus), I had secured a history to the effect that after known exposure to poliomyelitis, the family had gone on an automobile trip toward the center of the state, and that while away on this visit, one of the children, a boy, A. N., aged nine, had become ill on July 20, causing the family to return home. This child developed a typical paralytic case of poliomyelitis. I, therefore, drove the 109 miles back to Holland Village and re-interviewed this family, inquiring exactly as to where they had been on their auto trip. I shall never forget the thrill I received as the mother gave me directions to reach the farm where they visited, for in telling me to take a certain new highway, fork on to the old highway at a certain point, turn left at the end of this road where a meeting house was located, et cetera, she was giving me directions leading directly to the farm of the twins! But she stopped one farm this side. I then dashed back to the farm where this family had visited and learned that two children on the farm, a girl, E. B., aged eight, and a boy, R. B., aged seven, had become ill about July 25, after the visitors from Holland Village had left. Their younger sister, G. B., aged three, who had been away on a visit, was brought back to the farm just prior to the development of the illnesses in her brother and sister, and about August 1, she, too, became ill. All three of the illnesses were called by the family "summer flu," but the boy, R. B., gave a history of having difficulty in walking for a period following his illness, and on the strength of this history, his case is considered one of paralytic poliomyelitis. The twins had been brought over by their mother to this neighboring farm to visit, and had played with G. B., right at the time of her illness. About a week later the twins became ill, both on the same day, August 7. One developed paralysis of the left leg, and the other paralysis of the right deltoid muscle.

This series is of particular interest because if

one investigator had not investigated both the Holland Village family and the Renville County cases and had not obtained and remembered the history of an automobile trip by the former to a similar period of another suspicious case in the household. The symptoms must be similar to the systemic symptoms experienced in paralytic cases of poliomyelitis. An illness with symptoms

TABLE II. SEX AND AGE DISTRIBUTION

(Paralyzed, non-paralyzed and suspicious cases of poliomyelitis among members of 157 households in which paralyzed and non-paralyzed poliomyelitis cases occurred.)

Age Group	Number in households		Number of Cases					
			Paralyzed		Non-paralyzed		Suspicious	
	Male	Female	Male	Female	Male	Female	Male	Female
0– 4	64	58	22	13	1	2	18	14
5– 9	74	73	19	15	5	3	25	33
10–14	81	58	17	12	9	3	22	17
15–24	90	79	21	11	5	2	9	15
25–49	121	133	2	3	0	1	8	13
50 and over	32	15	0	0	0	0	0	0
All ages	462	416	81	54	20	11	82	92
Total	878		135		31		174	

the general vicinity of the latter, the connection between the two would not have been discovered. If the association had not been determined, these cases in the twins might very well have been held up as examples of poliomyelitis suddenly appearing in a community in which there had been no poliomyelitis previously, and occurring on an isolated farm among children who had not been away all summer and who had had no visitors.

Suspicious Illnesses in Household of Poliomyelitis Patients

The suspicious illnesses occurring in households with paralyzed or non-paralyzed cases of poliomyelitis are of particular interest, and one may inquire as to whether or not, in the absence of laboratory work to detect the presence of virus in these cases, there is any epidemiological data which may suggest whether or not these illnesses actually were subclinical infections with poliomyelitis virus.

As stated at the beginning of this paper, a suspicious case is taken as an illness in a household associate of a paralyzed or non-paralyzed case. The further stipulation is made that it must occur within three weeks of the onset of symptoms in the paralyzed or non-paralyzed case or within

TABLE III. SYMPTOMS IN SUSPICIOUS ILLNESSES

(Among the 878 household members of the 166 poliomyelitis cases.)

Symptom	Number	Per Cent
Headache	87	50
Fever	49	28
Diarrhea	43	25
Vomiting	42	24
General malaise	23	13
Dizziness	21	12
Abdominal cramps	17	10
Constipation	14	8
Sore throat	9	5
Drowsiness	6	3
"Fussed" (infants)	3	2
Recorded only as "flu"	2	1

suggesting no possibility or probability of its being due to the poliomyelitis virus is not included, such as a fracture, one of the exanthemata, or any illness definitely diagnosed as something else, (or even a common cold, if consisting merely of the usual coryza and rhinorrhea).

There were 878 household members in the 157 families of the 166 paralyzed and non-paralyzed cases investigated. Among these 878 individuals there occurred 174 illnesses classified as suspicious cases (Table II). Some additional illnesses may have occurred subsequent to the epidemiologist's last visit, and, therefore, are not included in the tabulations. Furthermore, a few cases were reported and investigated so long after onset that it is likely some of the illnesses occurring in other members of the household were not recalled. These errors of omission would apply more to the suspicious illnesses, of course, than to the paralyzed and non-paralyzed cases, so it is well to keep in mind that the number of suspicious cases is a minimum figure.

TABLE IV. AGE DISTRIBUTION OF SUSPICIOUS CASES AND DEFINITE (PARALYZED AND NON-PARALYZED) CASES

(Among members of households in which paralyzed and non-paralyzed cases of poliomyelitis occurred.)

Age Group	Definite Cases		Suspicious Cases	
	Number	Per Cent	Number	Per Cent
0– 4	38	23	32	18
5– 9	42	25	58	33
10–14	41	25	39	22
15–24	39	23	24	14
25–49	6	4	21	12
50 and over	0	0	0	0
All ages	166	100	174	100

A list of symptoms was not checked in investigating these suspicious illnesses, but a routine inquiry as to symptoms by systems was pursued. A glance at the symptoms given may serve to indicate the nature of these illnesses. They are presented in Table III.

It is noteworthy that no one symptom exceeded 50 per cent, which further shows the difficulty of diagnosis upon a purely clinical basis. Taking the first four symptoms, however, headache, fever, diarrhea, and vomiting, 82 per cent had one or more of these symptoms. As to headache, which is a frequent complaint at any time, and due to a great variety of causes, it should be stated that in no instance was this the only symptom, but was always in combination with one or more of the symptoms listed above. A headache alone was not counted as an illness.

TABLE V. AGE AND SEX SPECIFIC ATTACK RATES FOR DEFINITE (PARALYZED AND NON-PARALYZED CASES COMBINED) AND SUSPICIOUS CASES

(Among members of households in which paralyzed and non-paralyzed cases of poliomyelitis occurred.)

Age Group	Attack Rates (Per Cent)			
	Definite		Suspicious	
	Male	Female	Male	Female
0– 4	36	26	23	24
5– 9	32	25	34	45
10–14	33	26	27	29
15–24	29	16	10	19
25–49	2	3	7	10
50 and over	0	0	0	0
All ages	22	16	18	22

Before proceeding further let it be specifically stated that it is neither claimed nor believed that every case considered here a suspicious case was due to an infection with poliomyelitis virus. Due to the lack of sufficiently characteristic symptoms to distinguish these illnesses from upsets which may result from various etiologies, and which are present in any large group of individuals at any one time, it seems likely that at least a few illnesses due to other causes have been included in this group.

The age distribution in the definite cases as compared with the suspicious cases is presented in Table IV. From this table it is evident there is a rough similarity in the age distribution in the two types of illnesses.

Age specific attack rates according to sex for definite cases and suspicious cases are given in Table V. From this table it will be noted that among the definite cases the attack rate was higher among males than among females for every group, with the exception of the twenty-five to forty-nine age group (only six cases in this entire group), which is in agreement with the well-known preponderance of males among recognized cases of poliomyelitis. When the suspicious cases are considered, however, the reverse is true, and females are found to have suffered

(Continued on Page 950)

CRANIOCEREBRAL INJURIES*

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THE adequate treatment of craniocerebral injuries is still a serious problem. The majority of patients with such injuries will recover without any treatment or regardless of the treatment, and a fairly large group will die in spite of any aid that can be given them. There is a small group of these patients, however, whose survival is dependent entirely on the type of treatment instituted.

It is the purpose of this paper to discuss the indications which demand proper treatment if the patient is to recover and to briefly outline the type of treatment which has proven satisfactory at the Ancker Hospital in Saint Paul.

The following pathological states can occur in head injuries and must be differentiated, as far as possible, in each case:

1. Concussion.
2. Contusion } With or without intracerebral
3. Laceration } hemorrhage or diffuse subarachnoid hemorrhage
4. Edema, or increase in cerebrospinal fluid.
   The actual fluid changes which take place in this fourth group are not clear, but whether they be actual intracellular edema, perivascular increase in fluid or increase in fluid in the subarachnoid space, they will be referred to simply as edema.
5. Hemorrhage, extradural or subdural.

The question of fracture of the skull is of secondary importance, unless, of course, there is a depressed fracture, in which case the fracture must command our most careful attention, but only in so far as it may cause brain damage or rupture of the vessels.

Concussion, contusion and laceration of the brain cause physiological and pathological lesions, which at the present time are not amenable to treatment. On the other hand, edema and hemorrhage are states which can be treated, due to the fact that they both cause increased intracranial pressure. It is therefore evident that increased intracranial pressure is the only state which is amenable to our present-day methods of treatment. If the increased intracranial pressure is due to edema or increased fluid, medical management is necessary. If the increased intracranial pressure is due to an extradural or subdural hemorrhage, surgical treatment is indicated. It is thus evident that the recognition of two conditions is all-important in the treatment of craniocerebral injury: (1) whether there is increased intracranial pressure present, and (2) if there is increased intracranial pressure, is this due to edema or is it due to hemorrhage?

1. The Determination of the Presence or Absence of Increased Intracranial Pressure

Increased intracranial pressure may be recognized in five ways:

(a) By observation of the state of consciousness of the patient.
(b) By observation of the blood pressure, pulse and temperature.
(c) By the subjective symptoms of the patient.
(d) By spinal puncture.
(e) By examination of the ocular fundi.

(a) Observation of the State of Consciousness of the Patient

Unconsciousness is not necessarily a sign of increased intracranial pressure. A patient without any increased intracranial pressure may be unconscious due to severe trauma to the brain. However, in a patient who is first conscious after a head injury and then becomes unconscious or in a patient whose state of unconsciousness becomes deeper, it is very probable that the intracranial pressure is increasing. The recognition of deepening coma requires frequent observations, as often as every two or three hours. Painful stimuli will aid in determining the depth of unconsciousness and the rate of progression. The most satisfactory method of producing such stimulus is by supraorbital pressure or by pressure over the styloid processes in front of the mastoid processes on each side. The patient will resist such pressure, if not too deeply comatose, and by observing muscular contraction during resistance, valuable information can be obtained concerning weakness or paralysis of the muscles of the face and extremities.

*From the Department of Surgery, University of Minnesota Medical School. Read at the annual meeting of the Minnesota State Medical Association, St. Paul, Minnesota, May 27, 1941.

The state of consciousness in determining increased intracranial pressure, is only an aid, and it is necessary to have other evidence before making such a diagnosis.

(b) Observation of the Blood Pressure, Pulse and Temperature

Cushing demonstrated that a rapidly increasing intracranial pressure will cause a rise in blood pressure, a slow pulse and a rise in temperature. This is an extremely important observation in those cases which have an extradural hemorrhage, but unless frequent observations are made, every half hour to one hour, this change may not be observed. These frequent recordings of blood pressure, pulse rate and temperature are particularly important in the first twenty-four hours, as it is during this period that an extradural hemorrhage develops, as a rule.

The fact that there is no increase in blood pressure nor decrease in pulse is not proof that there is not a hemorrhage, as shock or hemorrhage elsewhere may mask these signs, but on the other hand, if these signs are present they strongly suggest a rapid rise in intracranial pressure which is usually caused by hemorrhage.

A slow increase in intracranial pressure does not, as a rule, affect the blood pressure and pulse rate to a very significant degree. A slow increase in intracranial pressure is usually caused by edema, chronic subdural hematoma or other expanding lesions of the brain.

(c) The Subjective Symptoms of the Patient

Headache, nausea, vomiting and lethargy are subjective symptoms which, in the presence of a head injury, strongly suggests the presence of an increasing intracranial pressure.

If, after an evaluation of the state of consciousness of the patient, the blood pressure and pulse rate, and of the subjective symptoms of the patient, there is doubt, and there frequently will be, as to the state of intracranial pressure, a fourth diagnostic measure is available for its determination, namely, spinal puncture.

(d) Spinal Puncture

A spinal puncture is at first a diagnostic, rather than a therapeutic, procedure, and it is our custom to use it in the first twelve to twenty-four hours only if, after observation of the state of consciousness of the patient, the blood pressure and pulse leaves one in doubt as to the amount of intracranial pressure. In the succeeding days spinal puncture becomes increasingly important, not only as a diagnostic measure, but also as a method of treatment. This is particularly true in those patients whose state of consciousness does not change and whose blood pressure and temperature remain stationary. In these instances, repeated spinal puncture is invaluable for the measurement of the intracranial pressure and is of value in the treatment of increased pressure due to edema. So far as we know, a spinal fluid pressure reading is the most accurate and simple method of determining the amount of intracranial pressure, unless, of course, there is a block to the flow of spinal fluid in the aqueduct or fourth ventricle, in which case the spinal fluid pressure would be erroneously low.

If it is admitted that spinal puncture is easily performed and that it accurately measures intracranial pressure, we might ask why one should ever hesitate to perform spinal puncture. The controversy concerning the diagnostic and/or therapeutic value of spinal puncture is well known. It is our opinion that early spinal puncture (within the first twelve hours) with rare exceptions will give no information that cannot be obtained by careful observation of the state of consciousness, blood pressure, temperature and pulse, and that it unnecessarily disturbs the patient.

(e) Examination of the Ocular Fundi

There is a fifth maneuver by which intracranial pressure may be diagnosed, that is, by the examination of the fundi. This is a more specialized procedure and is of particular importance a week or ten days after injury, when it is a useful measure in diagnosing subdural hematoma. Persistent drowsiness and headache should suggest a fundus examination for papilledema.

The recognition of increased intracranial pressure is most important, because it is the crux of the successful treatment of head injuries. If there is no increase in intracranial pressure, the symptoms are due to concussion, contusion or laceration of the brain and no specific treatment is of value. If there is an increased intracranial pressure, edema or hemorrhage is present and it remains only to differentiate that small group of cases which have extradural or subdural hemorrhages from the large group which has edema.

2. The Differentiation of Extradural or Subdural Hemorrhage from Edema as a Cause of Increased Intracranial Pressure

This differentiation is often difficult and an adequate discussion cannot be given here, but, in general, localizing signs, such as progressive paresis, or paralysis of muscle groups, dilated pupil, et cetera, in the presence of increased intracranial pressure suggest the presence of a hemorrhage.

Emergency Treatment.—Needless to say, patients who have suffered head injuries frequently have sustained concomitant injuries which are more serious in their immediate effect than the head injury. If a head injury is severe enough to cause death within the first few hours following the injury, it is safe to say that no form of treatment which might have been instituted would have been successful. Therefore, valuable time is never wasted in ascertaining the general bodily condition and in giving adequate emergency treatment for shock, fractures, et cetera. Patients suffering head injuries only, suffer to a surprisingly small degree from shock. Consequently transportation of these patients to hospitals with adequate facilities for their care is possible.

Emergency treatment consists for the most part of care of lacerations and ascertaining the presence or absence of depressed fractures. If a depressed fracture is present, adequate cleaning with a copious saline wash, control of hemorrhage and transportation to a hospital where adequate decompression can be carried out is indicated.

Active Treatment.—As stated above, a correct diagnosis is the most important factor in the treatment of craniocerebral injury. Because observation plays a major rôle in the diagnosis, a definite routine for all head injuries is indicated. This routine consists of:

(a) Half-hourly to hourly recordings of the blood pressure, pulse and temperature, depending on the severity of the injury. If little change appears in the first twenty-four hours, the interval of recordings can be increased to three or four hours.

(b) A record of the state of consciousness of the patient at frequent intervals.

(c) A thorough neurological examination at frequent intervals, depending on the severity of the injury.

(d) The head of the bed should be elevated slightly if there is no shock, and there should be no constricting bandages around the neck. If cerebrospinal fluid is flowing from either the ears or the nose, efforts to promote free drainage should be made, such as turning the head so that the draining ear is dependent. Spinal puncture, in the presence of the escape of cerebrospinal fluid from the ear or nares, is, as a rule, not necessary and is contraindicated.

(e) *Spinal Puncture.*—As has been indicated, spinal puncture is primarily a diagnostic procedure when there is doubt as to the state of the intracranial pressure. It is our practice to do diagnostic spinal punctures on all cases after twelve to twenty-four hours, if the injury is severe or if there is no improvement, unless, of course, there is definite evidence of an extradural hemorrhage, in which case spinal puncture is contraindicated because it may increase the hemorrhage.

If on spinal puncture there is an elevation of pressure above the normal of 120 to 160 mm. of water, enough spinal fluid is removed to bring the pressure to normal, or in cases of exceedingly high pressure, to half its original level.

In cases in which the spinal fluid pressure is elevated, spinal fluid is removed at six-hour or twelve-hour intervals. The other medical measures for the reduction of increased intracranial pressure as given below are instituted.

The greatest significance of blood in the spinal fluid is that it is evidence of severe enough damage to cause rupture of blood vessels into the subarachnoid space. The prognosis in such cases is graver than in those having a clear spinal fluid. It has been experimentally shown that spinal puncture does not appreciably decrease the amount of blood in the subarachnoid space.

(f) *Dehydration.*—Intracranial pressure can be reduced by dehydration. Fluids are restricted for twenty-four hours to 1000 c.c. There is a danger that dehydration may be carried too far. It is difficult to determine the fluid requirements of an unconscious patient, because such a patient is frequently incontinent, and good judgment is necessary in administering fluid. As a general rule, a patient should never be given less than 1000 c.c. in twenty-four hours, and if the period of unconsciousness is prolonged for four or five days, it is wise to give 2000-3000 c.c. of fluid daily.

Hypertonic solutions of 50 per cent sucrose should be given if it has been decided that increased pressure is due to edema. Our practice has been to do a spinal puncture and reduce the pressure by the removal of fluid. This is followed in three to six hours by 50 c.c. of 50 per cent sucrose or 25-50 c.c. of sorbitol. A spinal puncture is done at the end of six hours, and, if the pressure is still elevated, another injection of hypertonic sucrose is given. This is followed in six hours by another spinal puncture, and the procedure is repeated until improvement has taken place. During these procedures, the presence of an extradural or subdural hemorrhage must always be kept in mind, as repeated spinal punctures will increase the hemorrhage.

From the foregoing, the necessity of using a spinal manometer is self-evident. Judging the pressure by the force with which it is expelled from the needle is exceedingly erroneous.

(g) *Sedation.*—The sedation of patients with craniocerebral injuries is a problem, as adequate sedation may mask important diagnostic signs. The opiates are considered to be contraindicated because of their depressant effect on respiration, and because of their constricting effect on the pupils. However, in severely injured patients who are conscious it may be necessary to administer opiates for the relief of shock-producing pain. This is justifiable, but in considering a diagnosis the amount of opiates previously given must always be taken into consideration.

Sodium luminal intramuscularly, pentothal sodium intravenously or chloral hydrate by rectum may be given as needed for the control of restlessness. It goes without saying that the amount given must be taken into consideration in evaluating the state of consciousness of the patient.

(h) X-rays need not be taken as an emergency procedure, unless a depressed fracture is suspected. Basal skull fractures can be diagnosed from the signs of ecchymoses around the eyes, blood behind the tympanic membrane or bleeding from the ear, or cerebrospinal fluid flowing from the ears or nose.

Occasionally when there is doubt as to the location of an extradural hemorrhage, a lateral x-ray film may show a fracture through the temporal or parietal bone, in which case the hemorrhage is more frequently found in the region of the fracture.

Every patient suffering from head injury should have an x-ray before discharge.

(i) The surgical treatment of head injuries consists in the suture of lacerations of the scalp, elevation of depressed fractures, and the liberation of extradural and subdural hemorrhages. A discussion of these technical procedures is not a purpose of this paper.

Conclusion

The successful treatment of head injuries depends to a great extent upon the recognition of the presence or absence of increased intracranial pressure. Those pathological entities which occur, but do not of themselves cause increased intracranial pressure, are not amenable to present-day methods of treatment.

If increased intracranial pressure is present, it remains to determine whether this state is caused by edema or by extradural or subdural hemorrhage, following which, appropriate measures can be taken to aid the patient's recovery.

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TREATMENT OF COMMON EYE INJURIES*

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EYE injuries are the most disabling of all nonfatal industrial accidents. Although the incidence of eye injuries in industry has been gradually decreasing due to education and safety measures, the number of eye accidents in rural and agricultural districts are increasing. Considering the fact that the United States has a blind population of 110,000 persons, 15 per cent the result of accident, the treatment of common eye injuries seems to be a subject worthy of consideration.

Conservation

The first thought in the treatment of all types of eye injuries should be conservation. Some vision can be saved for many eyes that at first examination appear quite hopeless. The sooner these cases are in the hands of a competent oculist, the better. In passing, I wish to say that the old teaching that a perforating wound of the eyeball, especially through the corneo-scleral area (danger zone) indicated removal of the eyeball at once as a safeguard against sympathetic ophthalmia, and that eyes with intraocular foreign bodies which cannot be removed for various reasons, should also be enucleated for the same reason, has now been proved false, for we have found that under proper management, it is perfectly safe to conserve the eye. As a matter of fact, in over thirty-five years of practice, I have never seen a case of sympathetic ophthalmia, and this is the experience of most oculists. This fallacious teaching, like so many others in medicine, has been copied from one book to another, without foundation in fact.

Histology and Physiology

Intelligent first treatment of wounds of the eye is probably more important than that of wounds in any other part of the body. As many cases are, of necessity, first seen by the general practitioner, it is very necessary that he be able to render intelligent service, and that he also have a realization of possible later complications of even the most minor eye injury. In treating eye injuries, we must keep in mind two things: (1) to preserve as good-looking an eye as possible; and (2) to restore, or maintain, as much function as possible. With these objectives in mind, I am going to refresh your knowledge of the histology and physiology of the cornea, the most important part of the eye, and the part which is most frequently injured.

The epithelial covering of the cornea possesses a remarkable resistance to infection, in spite of the fact that it does not receive the blood supply directly, as do other organs, but indirectly by dialysis from the conjunctival blood vessels at the limbus. This corneal epithelium provides an amazing safeguard against both trauma and infection by virtue of its rich sensory nerve supply and by reason of the imperviousness of the superficial epithelial cells. Immediately beneath the epithelial layer is Bowman's membrane, which is quite impervious to infection when unbroken. Next is the substantiæ propria cornea, which is made up of lamellæ of transparent collagenous fibrillæ, between which are fixed cells, or corpuscles and wandering leukocytes. This is much less resistant to infection than the two overlying layers. Then comes another very resistant glass-like membrane, Decemet's membrane, then a layer of endothelial cells.

It is essential to keep these facts in mind in every case of eye injury, as it is necessary for proper treatment and for proper visualization of the healing of wounds in the anterior segment of the eye. When a wound in the cornea becomes infected, the superficial corneal lamellæ become necrotic because wandering corneal leukocytes have invaded them to stamp out the infection. No blood being in the cornea, the leukocytes must travel through the interlamellar lymph spaces to the limbus, the nearest blood supply, and back to the site of the infection. Because of the long distance between the two locations, healing is slow and infection is not easily overcome.

Prevention of Eye Injuries

Prevention of eye injuries depends on three things: legislation, education, and organized accident prevention. The work done by the American Red Cross in its campaign of education to prevent ordinary household accidents is to be com-

*Read at the annual meeting of the Minnesota State Medical Association, Saint Paul, Minnesota, May 27, 1941.

mended, for 95 per cent of the typical home eye accidents could be prevented. There must be laws enacted to safeguard the youth of this country if we are going to remove from our records a large number of lost eyes each year. I am referring to the sale of fireworks, and Minnesota is to be complimented on the laws passed at their last legislature banning the sale of fireworks. It is the tenth state to pass such a law.

The education program in industry has made marvelous strides and the number of eyes lost in large industrial centers is less than in rural agricultural states, because in the latter many auto owners and farmers do their own repair work on machinery and automobiles without having had previous training for the work and without realizing the great danger not only to themselves but to those who work with them. We have no statistics on injuries of this kind but from the number of eye injuries we see outside of industry, I am quite sure the incidence of eye injuries is relatively much higher than in industry where the incidence is 9 for every 1,000 employes.

The use of goggles and glasses stands first among preventive measures, quite contrary to the popular idea that the wearing of glasses is a great hazard from the danger of the lenses being broken. This idea is likewise supported by experience, for I have seen only one case of injury to the eyeball by a broken lens.

History

When you first see an eye injury case it is very important to take a complete history as to the nature of the injury, when and how sustained, what treatment has been given, and to test the vision of the injured eye as well as of the uninjured eye, and a careful minute description of the appearance of the injured eye.

Before making the examination it is well to cleanse the eye and adnexia with a mild antiseptic, such as boric acid solution. An anesthetic should then be used, and the choice of anesthetics is a solution of either butyn two per cent or pontocaine (.5 per cent). Cocaine solution should not be used as it softens the superficial corneal epithelium which decreases its resistance to infection, and it also dilates the pupil, which in some cases is a decided disadvantage. Fluorescein solution should be used in all cases to determine the extent of the injury of the cornea as it reveals slight corneal abrasions which are so difficult to detect otherwise.

To make this examination it is essential that you have good light. Oblique illumination by means of a condensing lens is the most simple and satisfactory. First examine with the naked eye, and it is good practice to get into the habit of making your routine examination by means of a magnifying loupe. Much valuable information can be obtained by use of the slit-lamp.

Frequently a patient comes in complaining of a foreign body in the eye, when there is none, but there may be a slight abrasion of the corneal epithelium. Again, a patient may complain of being injured by a foreign body while pounding on a piece of metal, and on casual examination no foreign body can be found. In these cases, it is well to give the eye a thorough examination, as a minute particle may have perforated the cornea and lodged in the interior of the eye, in the lens or vitreous, giving the patient no sense of discomfort. When an intraocular foreign body is suspected, an x-ray study should be made.

Treatment should consist of systemic, as well as local treatment. In treating the so-called minor injuries we must not regard them too lightly. I believe that every patient who comes into our hands should be carefully examined before anything is done. We must always remember that most corneal ulcers, frequently having disastrous results, develop from a trivial or minor injury.

By far the most common form of trauma to the eyeball is caused by the entrance of a small particle which lodges somewhere in the conjunctiva or the cornea. The danger in these cases lies in infection, either from organisms already in the conjunctival sac, on the foreign body, or from organisms carried into the eye in attempting to remove it. If the foreign body is on the conjunctiva, it can be removed easily by means of a moistened cotton swab. If the foreign body is embedded in the epithelium, it is best removed with a sharp instrument, care being taken that after removal of the foreign body all infected tissue at the site is also removed as well as the surrounding corneal tissue which has been traumatized by the foreign body. A small dental burr is often a great help in this procedure. If the foreign body can be removed without injuring Bowman's membrane, infection rarely takes place, and the break in the epithelium heals in a very short time. If the foreign body has pene-

trated Bowman's membrane, and is removed early with aseptic precautions, healing will usually take place so rapidly that infection is shut out.

When Bowman's membrane is penetrated, and the case is seen for the first time twenty-four hours or more after the injury, there is often a narrow zone of grey infiltrate about the foreign body. Here the superficial corneal lamellæ are necrotic, and wandering corneal leukocytes have invaded them to stamp out the infection which is there. When the wound is not infected, healing may take place rapidly, but if it is infected, the invading organisms may increase; then their toxins must flow through the interlamellar lymph spaces to the limbus before reaching any blood supply. Then serum and leukocytes must travel back to the site of the injury to be effective against the organisms.

First aid in all kinds of perforating wounds, whether there is an intraocular foreign body or not, is a well-applied fixation bandage, because with perforating wounds we have the danger of expulsion of the intraocular structures such as prolapse of iris and ciliary body and lens, and danger of intraocular hemorrhage. We also have the possibility of infection, as there is an open pathway by which infection may reach the interior of the eye.

If the cornea is cut and there is injury to the lens and prolapse of iris and other contents, the eye is cleansed and well anesthetized. Then the prolapsed iris should be removed and if the lens has been injured, the lens material should be removed by suction and irrigation so that the lips of the wound in the cornea and sclera are clean. One or more stitches in the cornea are often necessary, after which a large conjunctival flap should be drawn over the entire wound, atropine instilled, and the eye securely bandaged.

In all cases when the corneal epithelium has been broken, an antiseptic ointment should be used, and the eye covered with an eye pad. The treatment should be repeated daily and under no circumstances should the patient be dismissed until the epithelium is smooth and does not retain a stain. It is often advisable to dilate the pupil with a 2 per cent solution of homatropine.

Perforating wounds with retention of the foreign body must be carefully studied, as we realize that only the aseptic and chemically indifferent foreign body can be retained in the globe without causing irritation and inflammation. Frequently chemical substances such as iron, copper, glass, and stone may cause but slight exudation and become encapsulated. The location of the foreign body is very important, as the choroid and ciliary body become most easily irritated, the vitreous and retina next, with the lenses the most tolerant. The size and shape of the intraocular foreign body have much to do with the tolerance, small rounded intruders being tolerated much better than large, sharp, or pointed objects.

A thorough x-ray study should be made, and the size, shape and location determined. Then, if the foreign body is magnetic, an attempt should be made to remove it with the magnet. I have found the Lancaster hand magnet very satisfactory, as it is much more easily handled than the giant magnet. Two methods are used: 1. An attempt may be made to remove the steel through the original wound in the anterior segment of the eye, or, if not through the wound, to draw it into the anterior chamber and then make a small incision at the corneo-scleral juncture through which the foreign body is removed by means of the small hand magnet. 2. If the lens has *not* been injured, and the foreign body is located in the vitreous or posterior segment, it is best to remove it by raising a conjunctival flap directly over the location of the foreign body, making an opening through the sclera through which the foreign body can be removed with the hand magnet.

In all cases of perforating wounds of the eye antitetanic serum should be given, and I have found the use of foreign proteins of immeasurable value. We use them as routine treatment. Atropine ointment should be used and a good fixation bandage applied. The patient should be given absolute rest.

Chemical burns are frequently most disastrous to the sight. Burns with alkalies, such as amonia and soda or potash are often very deceptive, as they generally appear at first less serious than they really are. The injured cornea retains its transparency for some time after the tissues have actually been killed to a considerable depth. Burns with sulphuric acid (battery fluid) are especially dangerous as one drop of sulphuric or nitric acid will often destroy the eye.

The best treatment is to put the patient on his back and flush as quickly as possible with plenty of luke-warm water between the well-opened eye-

lids. Do not waste valuable time securing substances to produce chemical neutralization. After this treatment, use a mild antiseptic ointment and fixation bandage.

Contusions

Injuries from large and blunt objects produce contusions and ruptures with dislocation of ocular structures. The most common are the tearing of the iris from its insertion, producing iridodialysis, rupture of the iris sphincter, and dislocation of the lens. Any of these lead to serious complications such as hemorrhage into the anterior chamber and occasionally blood extravasation within the corneal lamellæ. A dislocated lens is always serious, as it sets up an inflammation and often causes acute glaucoma. Contusion of the eyeball is often followed some weeks later by secondary changes, especially in the lens.

Summary

1. Following injuries to the eye a careful history should be taken.

2. Examination should be made with oblique illumination.

3. The injury should be described minutely.

4. A record should be made of the vision of uninjured as well as injured eye.

5. Even in minor injuries every aseptic precaution should be taken.

6. The eye should be covered with a patch in all cases of corneal injury.

7. First aid in the case of perforating wounds consists of atropine, a fixation bandage, and complete rest.

8. Do not advise enucleation of seriously injured eyes, as many, which on first examination appear hopeless, can be saved.

9. In case of burns from chemicals flush freely with luke-warm water as soon as possible.

INJURIES TO SOFT TISSUES OF THE NECK*

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THE NECK, because of its exposed and vulnerable position, is particularly susceptible to trauma of many types. The large number of important structures which transverse it and their almost total lack of protective covering make any injuries to soft tissues in this region a potentially dangerous one. For the same reasons the therapeutic problem involved in the treatment of such injuries may at times become quite complex.

Any consideration of the detailed anatomy of the neck is beyond the scope of this paper and for such information the reader is referred to the standard texts on the subject. Among the structures most commonly injured are the muscles, superficial and deep veins, nerves, thyroid gland, thoracic duct, larynx, trachea and esophagus, any or all of which may be involved in a single injury.

Types of Trauma

Trauma may be of either the blunt or sharp variety and may occur from without or within. Blunt trauma by a blow from a soft or hard object, by constriction by rope or by hand as in choking or from a severe twist produces bruising of the tissues, tearing of various structures and possibly fracture of cartilage of the larynx or trachea. This is followed by swelling, edema, extravasation of blood or possibly a hematoma which may assume serious proportions. The bleeding may continue, the blood dissecting along the fascial planes, at times in amounts sufficient to produce vascular or respiratory obstruction. Conservative treatment with immobilization and cold applications are usually sufficient although surgical intervention may be necessary to control continued bleeding, or tracheotomy to relieve respiratory obstruction from edema or extraneous pressure.

Sharp Trauma.—Incised wounds of the neck structures are usually produced by knife or razor cuts, self-inflicted or otherwise, glass cuts from automobile windshield or window glass, stab wounds from knife or glass, wood or other splinters, and by bullets, or other missles, large or small. They may cause damage to several

*Read before the annual meeting of the Minnesota State Medical Association, Saint Paul, Minnesota, May 27, 1941.

structures and may be extremely serious. Hemorrhage may be severe, vital structures may be laid bare or damaged and tissue spaces exposed to serious infection. Emergency treatment consists of control of hemorrhage by clamping, ligation or packing and the protection of the wound from additional soiling. Later, thorough cleansing with removal of all foreign material, a débridement of all devitalized tissue and accurate control of all bleeding points is followed by primary suture with or without the inclusion of a powdered sulfonamide compound. If the trachea, esophagus or thoracic duct has been injured the defect is repaired and packing or drainage left in the wound or anterior mediastinum instead of making primary closure. Such steps are advisable because of the dangers of infection and the facility with which it spreads along the fascial planes and through loose areolar tissue to the anterior mediastinum.

Muscles.—The muscles most usually injured are the platysma, sternocleidomastoid and prethyroid groups, though occasionally the scalene, omohyoid and constrictors of the pharynx and others may be involved. Primary suture should be carried out with special attention being paid to accurate approximation of the platysma if one is to avoid retraction and wide scar formation.

Vessels.—The superficial veins, because of their exposed position, are unusually susceptible to injury. Some of these veins if widely opened, particularly in a dyspneic patient, may suck air and permit air embolism. Pressure or packing below will control this tendency until clamping or ligation can be done. Injury to the internal jugular or subclavian veins or the carotid or subclavian arteries or their branches are of much more serious import and may result in blood loss of exsanguinating proportions. Prompt control by pressure followed by clamping or ligation offers the only hope. Primary suture of vessels while theoretically advisable is rarely feasible unless the injury occurs during an operative procedure.

Thoracic Duct.—Only occasionally is a thoracic or right lymph duct injured. If the duct is opened rather than completely severed, suture may be attempted although packing will usually suffice. If section is complete and conditions are favorable suture repair may be attempted, but ligation will frequently be necessary.

Nerves.—The superficial branches of the cervical plexus are most prone to injury but the resultant damage is slight. The brachial plexus though situated more deeply in the neck is not immune to serious injury. Injury, however, may result from a direct blow, a deep cut or stab, or a tearing from a strong jerk or traction on the arm. Direct repair may at times be possible if recognized but is usually difficult and frequently impossible. The vagus, sympathetic trunk, phrenic, or recurrent laryngeal nerves may also at times be injured or interrupted.

Thyroid.—The thyroid gland is relatively exposed so that its substance as well as its blood supply may be cut or injured. Ligation of vessels, suture of incised portions or even excision of injured areas of the gland may be necessary.

Pleura and Lungs.—Unless reminded of it from time to time one is likely to forget that the cupola of the pleura and apex of the lung extend into the neck and must be considered among the cervical structures. Perforation of the pleura or the lung underneath may occur in any deep cut or stab wound of the neck and from bullet wounds, perforation by splinters from a fractured clavicle or during surgical operations in the cervical region. The resultant sudden pneumothorax may throw the patient into collapse. If the pleural opening is small a tension pneumothorax may result which unless recognized and promptly relieved may prove very serious for the patient. Leakage of air from the lung or pleural cavity into the areolar tissue of the neck may give rise to extensive subcutaneous emphysema leading one to suspect possible tracheal injury. Closure of the pleural defect is usually impossible but air-tight closure of a neck wound followed by aspiration of the pleural air will suffice unless there is leakage of air from the lung itself which will require constant negative pressure, catheter drainage of the pleura, but very rarely thoracotomy for suture of the injured lung.

Pharynx, Larynx and Trachea.—Direct Blunt trauma to larynx and trachea may result in bruising, swelling and edema, while greater force may fracture the hyoid bone or laryngeal or tracheal cartilage, a more serious or even fatal complica-

tion. Cough, hemoptysis, dyspnea, hoarseness and even emphysema frequently follow such injury. Rest, cold applications, steam and oxygen inhalations will frequently afford relief, but tracheotomy may become necessary to relieve obstruction and save life.

Sharp trauma, usually from a razor or glass cut may open the pharynx, larynx or trachea. Such cuts often gape wide enough to permit free escape of air and prevent extensive emphysema, but may permit the aspiration of blood and secretions which may later produce pulmonary complications unless aspirated from the bronchial tree. Deep stab or bullet wounds of the trachea may be followed by extensive emphysema of the neck, head, chest or even the whole body. If unrelieved, pain, dyspnea or even suffocation may follow. Wide exploration of the damaged area with primary suture of the tracheal wound must be carried out promptly. If the defect is too large or irregular for accurate closure, a patch of fascia lata may be used to reinforce the opening. Because of contamination of the wound by tracheal secretions, loose packing should be left in the field to help localize infection and free drainage should be instituted. The local implantation of one of the sulphonamide compounds into the wound may be of some value and does no harm.

Esophagus.—The deep position of the esophagus behind the trachea protects it from most agents which injure the other structures of the neck. Occasionally a deep stab or bullet wound penetrates the esophagus and causes leakage. Rarely a stick or other object carried in the mouth is rammed down the throat and forced through the pharyngeal or esophageal wall. More commonly some foreign body such as a bone, nail, pin or other sharp object becomes impacted in the esophagus, perforating its wall spontaneously or as a result of the injudicious passage of a stomach tube or bougie in an attempt to dislodge it. Similarly the passage of an esophagoscope may force such a foreign body through an area already weakened by infection or of itself may cause perforation.

Esophageal perforation from whatever cause is potentially at least a very serious matter. Escape of air from the site of injury into the loose areolar tissue of the neck causes a rapidly spreading emphysema which carries mouth and esophageal secretions and food particles teeming with virulent aerobic and anaerobic bacteria through the tissue spaces. Here, rapidly developing swelling, tenderness, fever and leukocytosis are indications of the rapidly spreading infection which follows such contamination. Direct extension of infection from the local field to the superior mediastinum occurs readily and constitutes a serious threat to life. Once considered a fatal complication it is now recognized that prompt surgical intervention with removal of foreign material, closure of the esophageal opening by suture if accessible, and the establishment of free and adequate drainage of the upper mediastinum with or without chemo-therapy will save a majority of these patients.

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PENETRATING WOUNDS OF THE ABDOMEN*

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PENETRATING wounds of the abdomen may be divided into three groups: stab wounds, gunshot wounds, and wounds by other miscellaneous objects. Statistics concerning these wounds have been so thoroughly discussed in the literature that no mention of them will be included here. But, in all other phases of the topic, outstanding opinions of various authors will be concisely presented.

Stab wounds of the abdomen have a mortality of about half that of gunshot wounds. These wounds are usually clean, sharp-edged, well defined incisions with little or no damage to adjacent or distant tissues. Unless there is severe hemorrhage, shock is slight. Infection is least liable in this group. Bacteria carried in are usually of a type to which the patient has some immunity. Fragments of clothing and other foreign matter also may be embedded in the wound. All stab wounds which possibly have penetrated the

*From the Surgical Division of the Brainerd Clinic, Brainerd, Minnesota. Presented at the Minnesota State Medical Association meeting in Saint Paul, May 27, 1941.

abdominal cavity should be explored by an incision extending to the peritoneum and search made for openings into the cavity. If the peritoneum is penetrated, the abdomen should be opened and a search made for injuries to any organs. If no perforation is found, one should débride, cleanse with normal saline, insert a superficial drain, and close.

Dangers are hemorrhage, penetration of a hollow or solid viscus, and shock, in that order. Large knives may cut big holes in the intestines or blood vessels and cause massive hemorrhage or infection. The liver is frequently injured in deep stab wounds; the spleen and kidneys rarely.

Gunshot wounds have varying effects depending on the size, character, and speed of the missile. Wounds by high-speed rifle bullets, especially if metal jacketed, usually have a straight course from entrance to exit. These bullets usually perforate everything in their course. If the bullet is small, the danger from hemorrhage is less but always present. Perforations too are important and may be one or many, involving any organ. Shock is always present in bullet wounds, but the smaller the bullet the less the immediate shock. The adjacent tissues are usually damaged by indirect force. Even distant organs may be indirectly injured. The amount of injury varies from minor contusions to explosive-like action which may completely destroy the spleen, a lobe of the liver, a kidney, or other organ. Even hemorrhage into the mesentery and retroperitoneal spaces without perforation is not uncommon. The pancreas is least often affected, but, when injured, is most dangerous.

Larger bullets, especially if not jacketed, cause more damage to the adjacent tissues. By direct force, wide areas around the track are badly contused. Indirect injuries to distant tissues are common and often severe. These bullets are more liable to deflection, and the slower the speed the greater the changes in their course. Rotation due to rifling may also change the course of the projectile. In this group of wounds, the dangers are (1) shock; (2) massive injury to adjacent and distant tissues; and (3) hemorrhage. Infection is more frequent than in wounds caused by small, rapidly moving bullets, even when the intestines are not perforated. Foreign matter is more liable to be implanted in the tissues.

Shotgun wounds inflicted at close range may be considered about the same as those of large, slow bullets, but the damage to adjacent tissues and hemorrhage is usually greater. Shock is much greater. Large holes are frequently torn and fairly often whole organs are destroyed. The area of damage can be anatomically fairly well outlined except for the secondary effects. Wounds made from greater distances are a different problem. In these, many entrance wounds may be made and many organs, both solid and hollow, perforated. However, the small wound often seals itself. Here it might be advisable to watch the patient and treat him expectantly, especially if the surgeon is a slow operator. One author has reported seven shotgun wounds, all of which had probably perforated the intestines, treated conservatively with recovery.

Wounds by miscellaneous objects are so varied in cause and effect that the surgeon must evaluate each one separately. Here, surgical judgment is most important. Injuries caused by everything from ice picks, lathe shavings, stones, and flying steel fragments to 2 by 4 inch timbers have been reported.

Foreign bodies may perforate the intestinal tract from within. Swallowed pins and needles are the most common articles. Dr. Wyatt of Minneapolis recommends keeping the patient quiet, feeding a bland diet, and making a radiograph every twelve hours. If the pin or needle stays stationery for twenty-four to forty-eight hours, the abdomen should be opened and the object removed. Cotton and barium mixture are condemned, as their use may cause obstruction. Pins, razor blades, and other sharp objects introduced through the anus have been known to perforate the rectum. Here, wide incision must be made through the perineum, removing, if necessary, the coccyx or even part of the sacrum. The wound in the rectum should be repaired, leaving wide drainage for closure by granulation.

Symptoms and Physical Findings

In all penetrating abdominal wounds, the most common symptom is weakness. This varies with the degree of shock commonly present. A rapid pulse is frequently noted and when combined with falling blood pressure is a sign of massive hemorrhage. Low hemoglobin determinations come too late to be of diagnostic value. Pain is second in frequency, yet often there is little or none. Storck reports pain often absent in perfo-

rations of the large intestine. It is more often present in perforations of the stomach and small intestine. Pain depends more on damage to the soft parts and does not indicate the extent of the injury. Pain in the back points to abdominal hemorrhage. Nausea and vomiting are not frequent and, while blood in the vomitus is a sign of stomach injury, its absence is of no value. Air hunger and thirst are danger signs of hemorrhage.

The physical findings are of little more value. To wait for definite signs is often fatal. Abdominal tenderness is not always present, but when present suggests perforation, and, if combined with rigidity, means perforation of some viscus. Dullness in the flanks means blood in the peritoneal cavity. Gas indicates perforation, but its absence is of no value. Bennet of Chicago reports free air in an abdomen without perforation of the intestine or lung probably carried in with the knife. Rapid or irregular breathing is frequent and usually due to shock. Early abdominal distention is rare; later it is more frequent; but, like decreasing hemoglobin in prolonged hemorrhage, usually occurs too late to be of diagnostic value. Rigidity with back pain and rapid pulse usually means a massive hemorrhage and demands immediate exploration.

Treatment

Treatment must be started at once. Primary shock must be treated before any surgical procedure is attempted. The mortality rate is very high when operations are done before shock is controlled. External heat is the first need. Replacement of lost fluids by intravenous five per cent glucose in normal saline, plain normal saline, or five per cent glucose in sterile water should be started at once. As soon as matched blood is available, transfusions should be given by either the direct (preferred) or citrate method. In the presence of massive hemorrhages, transfusions are life savers. If matched blood is unavailable, isotonic solutions are best. Morphine, in sufficiently large doses to control pain, is given early with atropin added to the first dose as an aid for later anesthesia. Morphine also slows peristalsis and lessens the danger of spreading contamination. Stimulants are used when indicated. Coramine is the best respiratory stimulant and caffeine sodium benzoate, metrazol, and camphor are recommended. It is customary at the Brainerd Clinic to give shock cases 1 c.c. of cortate (adrenal cortex) and repeat once daily for three days. On the way to the operating room, x-rays may be taken to locate bullets or gas in the abdomen, and the plates may be read later.

When perforation is suspected, one must not wait for definite signs and symptoms, but should explore at once. One author advises taking the patient directly to the operating room, treating shock and making diagnostic procedures there, thus saving time and extra handling of the patient. Our patients suspected of perforation of the stomach are given 30 c.c. of 2 per cent solution of methylene blue. The time saved by this procedure in locating perforations greatly outweighs any danger of infection. If not previously given, 1 c.c. of prostigmin or pitressin is given to lessen postoperative distention. If there is no evisceration, the abdomen is shaved, using benzene for a lubricant, washed with ether and then painted with tincture of iodine. The iodine should be removed before or after operation. If evisceration has occurred, no shaving is done. The protruding bowels are irrigated thoroughly with normal saline; often two or three gallons are used. The abdomen is then scrubbed thoroughly with ether.

Anesthesia.—If shock is not pronounced and the systolic blood pressure is between 100 and 150, spinal anesthesia is the choice. In respiratory complications, spinal anesthesia should be used. For the patient in shock, with severe hemorrhage, a pathologic heart, or slow respirations, ether still is best. Cyclopropane, with which one can use a larger percentage of oxygen, ethylene, or ethylene and ether may be used where the anesthetist has a special ability with one type.

Operation.—Of first importance in gunshot wounds from high powered rifles, large pistols, and shotguns at close range is an incision large enough to explore all adjacent areas thoroughly and to examine quickly distant organs for gross indirect damage. In stab wounds, only the area traversed by the knife should be explored and the incision made accordingly. The incision may be made in or near the line of penetration. Right or left rectus incisions are most common as they give good exposure and save time.

When down to the peritoneum, Dr. Maxeiner of Minneapolis fills the wound with water and looks for gas bubbles. Finding none is of no

value, but, if found, a perforation in the gut or through the diaphragm into the lung is indicated. The peritoneum must be opened cautiously, causing no sudden change in intra-abdominal pressure lest a quiescent hemorrhage be started again or a slow hemorrhage be aggravated. Quickly evaluate the abdomen for the presence of blood, gross damage, perforations, extravasation of urine, odor of colon bacillus and free gas. First stop hemorrhage; when possible pick up bleeders and ligate. Liquid blood in the abdomen is best removed by a suction apparatus. Sponging may spread contamination or open punctures. Large clots should be carefully picked out. Retroperitoneal hemorrhage, unless there is active bleeding, should be let alone.

Large tears in the liver may be packed with gauze, the other viscera and wall protected by a rubber tissue tube. The gauze must be left four to seven days and then removed very cautiously, twisting to release and removing only a little at a time. Simple tears should be sutured. Turner presented an excellent method of preventing cutting by sutures. One deep stitch, using swaged needle sutures, is placed parallel with, and near, each edge, and tied loosely. Then the needed sutures are placed behind these and tied over them. Other surgeons use small strips of fat at the entrance and exit of perforations by the needle to prevent tearing. Indirect injury to the liver is often high and hard to reach. Here, the incision may be extended transversely near the costal margin. This incision also is used when a badly damaged spleen is found. Injury to the spleen is difficult to repair and, if extensive, the spleen should be removed. Transfixation of the pedicle is dangerous. Be careful not to damage the pancreas.

Perforations in the stomach and intestine should be carefully searched for and closed. Small perforations are best closed by a deep purse-string reinforced by interrupted sutures. With larger wounds, the Lambert or Cushing suture is used, reinforcing by a row of interrupted sutures. If an exit is on the posterior wall of the stomach, the quickest repair is to enlarge the anterior wound and repair the posterior from the inside. There may be many perforations and all must be found and sutured. Autopsy records show a large proportion of missed perforations, the closure of which might have saved a life. In mass perforations, one author advises the exteriorization of the loop damaged beyond repair. Resections have such a high mortality that they should rarely be done unless absolutely unavoidable. Later, resection can be done more safely. Be sure duodenal and bile duct leaks are tight and wide drainage left, as escaping secretions damage surrounding tissues. Retroperitoneal damage often is the cause of late abscesses, and usually is safer let alone, draining later if necessary.

Injuries to the colon are not common. Frequently, contamination of the abdomen does not follow because of the presence of less fluid in the colon. They should always be drained, as, in spite of the type of repair, they may break down later.

When the rectum is perforated an incision must be made in the posterior perineum, removing the coccyx, if necessary, and providing wide drainage after repair.

The bladder is frequently injured and should be closed by a deep running suture just missing the mucosa, an interrupted row in the muscle, and another row of interrupted stay sutures in the peritoneum.

Injuries to the kidneys are rare. The patient's chance is better if they are not repaired, unless there is much hemorrhage. A later operation, opening an abscess or nephrectomy for a destroyed kidney, is much safer. Wounds involving the pancreas are very rare but usually fatal. The secretion causes digestion of the abdominal wall. Any damage should be repaired, bleeding stopped, and wide drainage left. Throughout the operation the patient must be watched for failing pulse and blood pressure, and the head of the table lowered in proportion to the fall. Before closing, the foreign body may be removed if easily found.

Débride the entrance wound if ragged, but do not waste time. Drainage must be left if an abdominal viscus is perforated, the organs badly damaged or probably infected. One cigaret drain may be sufficient; often one or two rubber tissue drains are added. The peritoneum should be closed with plain catgut. Chromic gut is best for buried sutures. Deep stay sutures of heavy waterproof material or nylon will help prevent wound failures. Silk, cotton or nylon should not be buried unless the wound is clean and dry. The skin may be closed with interrupted sutures of nylon, silk, cotton or clips. Often exit wounds should be débrided and drained. Save operating time whenever possible. In one large series re-

ported, when the operating time was under one hour most patients lived and when over one hour a large percentage died.

Postoperative Care.—The patient should be put to bed as quickly as possible, and external heat applied. If the abdomen is not contaminated, raise the foot of the bed; in a badly infected abdomen, the head of the bed should be elevated after a few hours to discourage subdiaphragmatic abscess. Nasal suction should be started as soon as the patient is conscious. In intestinal perforations nothing should be given by mouth for three days. Fluids should be administered in the form of intravenous glucose. If much blood is lost or shock is present, repeated transfusions should be given in proportion to the symptoms. If veins are inaccessible, some fluids can be given by hypodermoclysis. If no intestine was perforated, proctoclysis of glucose, soda, and water is useful. Prostigmin, 1 c.c. by hypodermic before the operation and repeated every four to six hours for three days, will often prevent abdominal distention. Metrazol, pituitrin, and pitressin also are recommended. A colonic tube will often relieve distention. Bronchitis, atelectasis, and pneumonia must be guarded against. All patients should have prophylactic tetanus serum.

Summary

1. Abdominal wounds in which perforation is suspected should be explored.

2. In case of much blood loss intravenous fluids should be given. Blood transfusions are best.

3. Shock must be treated and overcome before operation is attempted.

4. Incisions must be adequately large.

5. Operations should occupy as little time as possible.

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PHYSICAL EXAMINATIONS IN INDUSTRY

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PRE-EMPLOYMENT as well as periodic re-examinations are compulsory as affecting certain industries in many states of the Union through properly organized Boards of Industrial Hygiene which usually function hand in hand with the Workman's Compensation Act.

These examinations have for years been well organized and under state jurisdiction in the Carolinas and most of the seaboard states, because of occupational silicosis-asbestosis and other forms of pneumoconiosis; and all workers in these hazardous occupations are registered and compensated by their various states. Wisconsin is showing much activity in this di-

rection; and at present our own state of Minnesota has a Division of Industrial Hygiene which has been making a survey for nearly a year, its purpose being the classification and control of occupational diseases.

So far as I know, there are no such diseases charged against the operating end of the telephone business. Therefore, with us, this work is entirely voluntary, and its purpose is largely liaison between management and employe in the proper placement of workers on the basis of the mental and physical ability of the individual as well as the safety of fellow workmen in all departments, especially in the construction and maintenance of both outside and inside equipment. To quote an editorial in *The Journal of the American Medical Association:*

> One of the foremost objectives of Industrial Medicine is to fit every person to types and quantities of work according to his ability to perform such work continually without undue impairment, without injury to himself or to his fellow workman, and with profit to himself and his employer.

Preëmployment examinations in industry are only the primary steps in the individual's industrial health program and do not mean a requirement of one hundred per cent supermen and women. In over twenty years of this work, my own total rejections have been less than three per cent, while placements have been many times that; and a few were employed for rehabilitation after the last war. Our plan of examinations and placements for men is also that of the parent company—The American Telephone and Telegraph Company. It was carefully worked out by a council of medical directors and is similar to the physical examination procedure outlined by the Conference Board of Physicians in Industry. All men are stripped, and the examination is similar to that of the army. Partial examination may be made in some cases, and others may need special care.

New employes are graded A-B-C-D.

Class A.—Recommended for immediate employment in any position. Example: No physical impairment. Correction of carious teeth advised within six months.

Class B.—Recommended for employment in specific positions only. Example: Simple mitral heart disease; loss of vision, one eye—other eye normal; limited use of muscles of arm or leg; inguinal hernia controlled by truss. Persons employed in Class B should not be transferred without securing an opinion from the Medical Department.

Class C.—Recommended for employment after physical impairments have been corrected and then classed A or B. Example: Extensive caries of teeth; acute discharging ear; enlarged thyroid with symptoms; inguinal hernia without support.

Class D.—Not recommended for employment in any capacity. Example: Advanced tuberculosis; chronic trachoma; acute primary syphilis; true diabetes.

Great tact and kindliness must be exercised in dealing with all defectives in order not to discourage the applicant. In all the above cases, there is considerable allowable leeway, for example: under or overweight of 20 per cent; moderate impairment of vision and hearing; blood pressure variation, et cetera. All results and recommendations are forwarded to the employment department and are often discussed with them personally.

Blood Wassermann tests are usually routine; and I feel that industry will soon be doing routine Mantoux tests as well, with chest x-ray of the positive reactors. Widals and stool examinations if indicated are routine with food handlers. Periodic reëxaminations, including chest x-rays, are compulsory in many occupational disease districts and are reported periodically to the State Hygiene Boards. Industry in general, however, has found it valuable to combine this with accident prevention training by the Safety Engineering Department.

An ever-alert, health conscious management, however, is the best safeguard in industry and should supervise periodic examinations where they are not compulsory. With us, men over fifty years of age who are climbing poles should naturally be closely observed by the management and examined often.

All employes should be at liberty to ask for an examination and advice from the Medical Department through their department heads. If diagnosis is possible, or if further study and treatment is necessary, the individual should then be referred to the family physician along with a letter or telephone call giving all information possible and including any laboratory data obtained. In this way it is possible for the Medical Department to coöperate with the worker's physician; and every effort should be made to develop cordial relations with him.

The industrial physician should not treat any employe who needs home medical treatment. First Aid emergency care only should be furnished. For field accidents each crew should have "first aid" training and should carry "first aid" kits for this purpose. After the emergency care the family physician, the neighborhood doctor, or the hospital should be used, depending upon the gravity of the case.

Every effort should be made by the Medical Department in coöperation with the family physician to place the injured worker upon his return in some form of disability assignment. The greatest harmony and economy can thus be obtained for the benefit of all concerned.

In industry, as in other walks of life, cardiovascular and renal diseases are increasing and demand careful placement and checking. Often a little less work with a two-hour rest period at noon will keep these people on the job for many years. Definite periodic examinations should be made, and real interest shown in the individual to accomplish this.

The ever-present tuberculosis group gives the industrial physician his greatest opportunity in those districts having no occupational diseases. Many with arrested diseases are employed and re-employed, and there must of necessity be a clear-cut program of adequate periodic re-examinations in all of these cases with the complete coöperation of the individual and management with the Medical Department. Industry must assume its share of arrested tuberculosis cases existing in its community.

It is of interest to report the results obtained in checking several groups of tuberculosis exposures in some of our larger offices here in Saint Paul, Minneapolis, and Omaha. Out of a total of about two hundred Mantoux tests, over 60 per cent were positive in all ages, while over 75 per cent were found in those over thirty-five years of age. This is in considerable contrast to the results obtained in the school age group and in rural districts. In a small group of twenty-two employes just examined, fourteen were positive; and of these fourteen, ten had normal lungs, while four had demonstrable healed lesions, an incidence of nearly 30 per cent of arrested tuberculosis. Obviously, these cases need periodic re-examinations.

In conclusion, it is my opinion that the full time industrial physician of the future should have specialized training for this work, which requires acquaintance with management policy, public relations, employe relations, Industrial Commissions, Industrial Hygiene Boards, et cetera; and medical schools are already recognizing and meeting this need.

POLIOMYELITIS

(Continued from Page 934)

a higher attack rate than the males in every age group.

If, then, it is assumed that the suspicious cases as well as the definite cases were due to the poliomyelitis virus, one might hazard the opinion that although males more frequently experience involvement of the nervous system in infection with the poliomyelitis virus, females suffer a higher subclinical attack rate.

Summary

An epidemic of poliomyelitis is described which occurred in Minnesota in 1930, and was confined for the most part to the southwestern part of the state, a very rural area.

The radial spread from a central focus is shown.

Instances are given of the apparent spread through person-to-person contact.

Consideration is given to suspicious illnesses occurring in association with definite cases of the disease, and data presented which suggest possibly that upon infection with the poliomyelitis virus males are more apt to develop involvement of the nervous system and females are more apt to suffer subclinical attacks.

INFORMAL REMARKS AT TESTIMONIAL DINNER FOR DOCTORS A. R. COLVIN, J. F. CORBETT AND H. P. RITCHIE, CLINICAL PROFESSORS OF SURGERY*

OWEN H. WANGENSTEEN, M.D.
Toastmaster

HONORED Guests, Fellow Colleagues: We are met tonight to do honor to three of our Fellows who, by virtue of years of faithful, devoted and loyal service to the Medical School and University, are deserving of our highest praise. We all know Doctors Colvin, Corbett and Ritchie. They taught many of us. A whole generation of Medical School students at the University, as a matter of fact, has come under their stimulating influence.

It is my privilege tonight to call upon each one of them. It will be a real pleasure to hear, from their own lips, concerning their years of attachment to the Medical School. It is a duteous and pleasant obligation, as Chairman of the Department of Surgery, to say here that each of the men we are honoring tonight has made a contribution of major importance to the Department of Surgery. We honor them, not alone for their accomplishments, but also because of sterling qualities of heart and mind which command our admiration and respect.

I shall reverse the alphabetical roll call and we shall hear from Doctor Ritchie first. Dr. Harry Parks Ritchie was born in Wellington, Kansas. His father was Dean of the School for a number of years. And now, Wallace Ritchie, an alert participant in the activities of the Surgical Department and a product of the third generation, is continuing the lustrous record of the Ritchie family in the Medical School. I believe that I am correct in saying that Doctor Harry P. Ritchie, in point of years of service, is the oldest living active member of the Medical School Faculty. For, in 1894, Doctor Ritchie held an appointment as assistant in physiology. This is an approach to Surgery which many present aspirants for a career in the Department are using as a stepping stone. After receiving his M.D. degree from the Medical School in 1896, Doctor Ritchie entered practice and became identified later with the Department of Gynecology. Doctor Ritchie's first publication, as far as I can find, concerned "Migratory Pneumonia." This very afternoon, I learned for the first time that Doctor Ritchie took part in the Spanish War of 1898. His very good friend, the late Dr. A. A. Law, a distinguished member of the Department of Surgery, loved to speak of his exploits in that same conflict. Why Doctor Ritchie has been so reticent on the subject, I do not know, lest it be his innate modesty. When I first came to know Doctor Ritchie, in the period immediately following World War Number I, his principal activity at the University Hospital was operating chronic empyemas. Later, he was active in operating upon malignancies—an activity which excited, undoubtedly, his great interest in plastic surgery. In 1921 Doctor Ritchie published his first paper on "Congenital Clefts of the Lip and Palate." Reconstructive surgery has since become Doctor Ritchie's consuming interest, and he has made worthy contributions to the subject. In consequence of his interest, we have had at the University Hospital for years an unusually fine and active service of plastic surgery. Doctor Ritchie and I have changed shoes in the same dressing room for years and, in consequence, I have come to know him well and admire him greatly. It is my pleasure now to call on Doctor Ritchie.

HARRY PARKS RITCHIE, M.D.
Saint Paul, Minnesota

Dr. Wangensteen, Dean Diehl and Fellows of the Department:

I feel quite at home, with so many here with whom I have had something in common. It seems I have lived my whole life in the atmosphere of medicine, even before my parents brought a young lad of eight years old to Saint Paul in October 1881, which will be sixty years ago next October. We came here in order that Father could associate himself with Dr. Alexander J. Stone, who even in that early day showed the ability which was to make him one of the most expert and adept technical surgeons of my experience. The offices were at the Medical Arts Building of those days, at 4th and Jackson Streets and, of course, Parks' boy Harry was introduced to all the fraternity and had entree to all the offices in town.

There was J. H. Murphy of Civil War Fame, in whose office I first saw human blood in quantity. I got to know Dr. John F. Fulton, one of the keenest minds and with a political sense which had a great deal to do in determining the form and practice of medicine. Dr. C. Eugene Riggs, who at that time specialized in nervous diseases, became the head neurologist of the Northwest. Dr. Perry H. Millard, a man who had vision and ability and the faculty of translating vision into practical terms and bringing it to fruition (I think that's the word), the result of which we see today in our great Medical School, was a man of great activity, rather austere in manner, who permitted no sentiment or personal considerations to influence him in his great purpose. There was LeGrand N. Denslow, dapper in dress and smooth in manner, who was a consultant on skin diseases and who came to the frontier prepared by experience and study from the study of medicine in the East. Of course, there were many others. The only trouble in making such reminiscences is that they have no documentary support and may only be the impressions of a young lad, to be taken for what they are worth.

There was Dr. Parks Ritchie, who was introduced by that already well-known and estimable man, Dr. Alexander Stone. This man was in the group of Millard, Wheaton, Renz, Bean, Riggs and Denslow, who formed the Saint Paul Medical School. I remember the great thrill I had when Father announced that he was to be Professor of Obstetrics in the newly-formed Medical School: A professor in the family—Gee Whiz! I remember the discussion as to whether it would be possible to finance a trip East to prepare for such a responsible position. Finally it was decided that the trip should be made, and he went, and brought

*Sponsored by the Division of General Surgery of the Department of Surgery of the Medical School of the University of Minnesota and held at the Minnesota Union, June 10, 1941.

home all sorts of photographs of his teachers: Lusk, who was the top man on obstetrics in those days, Janeway, Austin Flint—names which stood at the top of the profession in those days, but which now are simply memories. I used to go to the Commencements of the School, only one of which I remember, but the memory of it has always been a great support to me when I try to talk offhand, as I am doing now. The valedictorian of the class was a handsome, upstanding, vigorous man, with a tendency towards the roly-poly type, whose name was Dr. Arthur J. Gillette, who became such a factor in the development of surgery in the State of Minnesota, and who left a monument in the Gillette State Hospital for Crippled Children. He forgot part of his address, but this seemed to have no effect upon his future marvelous position in medicine.

It was also known that a medical school had been formed in Minneapolis and we began to hear the names of Dunn, Moore and Dunsmore. The vision of Dr. Millard was the union of these two colleges, which was to be sponsored by the infant University of Minnesota. I cannot imagine a man more qualified to bring together these warring factions of St. Paul and Minneapolis. Even in those days, the profession in St. Paul was rapidly gaining a reputation of unity, consideration and camaraderie, which I think has continued over the years. Of course, it must be remembered that these men were all individuals who on their own efforts attained their position and sold their abilities to the public. Of course, the same situation applied to the men in Minneapolis, and this is simply a build-up for the marvelous administrative ability of Dr. Perry H. Millard. I have always thought that the influence upon the Legislature was in great part due to the fertile mind and ability of Dr. J. F. Fulton, but of course, the prime mover and master was Dr. Millard, who became not only Professor of Surgery but also the first Dean of the Medical School. Of course, he made a great job of controlling the individuals and forming a team, but I also see the political influence of Dr. Fulton in satisfying the members of the newly-formed faculty. Dr. Parks Ritchie left the Saint Paul Medical School to become Professor of Obstetrics in the Medical School at the University of Minnesota. I, being brought up in such an atmosphere and on speaking terms with every doctor in town, each of whom would say to me "Well, Harry, are you going to grow up to be a doctor like papa?", my future career was certainly mapped out, and when the time came to graduate from Saint Paul Central in 1890, the question came up as to what to do. I had some friends in Central who planned to go to Yale. Well, you may understand my parents' consternation when I made the announcement that I wanted to go to Yale—talk about Stuka dive bombers! Such a program meant a great sacrifice, but it is a great thing to have understanding parents. We looked over the prospectus, to find that there was a biology course which would be in effect a pre-medical course, a fundamental requirement today, but quite the exception in 1891. My friends were going into the academic department and in this connection a tragedy occurred in my life in the fact that one requirement for admission to the academic department was an examination in Greek which was not given in Saint Paul Central. So with my friends, I had to take a six-month course in Greek, before taking the examination. After it was all over, we found that the biology course in the academic department was a minor subject, whereas in the Sheffield Scientific School it was a major course, so I decided to transfer to the scientific course, which did not require Greek, so I had six months of agony for nothing. Ever after, if anyone happened to say the word "parasang" in my presence he was liable to get a bust in the jaw.

Well, I know what a great sacrifice it was on the part of my parents to send me such a long distance from home under the added expense of a college career. It was not until the second year that I came into contact with one of the great men of my memory, Professor Russell H. Chittenden, who at that time was top man in the country in physiology, and physiological chemistry, and who with my father, Dr. Archibald MacLaren and Dr. James E. Moore, was a wonderful model for a young man to follow. Dr. Chittenden was a great teacher who had the faculty of putting a touch of romance into such a primary and factual subject as physiology. In fact, his insistence on study and his personal incentive was such that no one in the class would dare to go into the lectures unprepared, and when it came to actual work in the laboratory, his insistence on proper notebooks of the various experiments and results and their application was such that with his editorial review of them they were really excellent, worth-while records. Of course, I had written home about this wonderful course, and it came to the attention of Dr. Richard O. Beard, Professor of Physiology in the newly-formed Medical School. It has always been a great pleasure to me to remember Dr. Beard's suggestion that when my Yale tour was finished, he would give me a position in the department, with the intention of developing a laboratory course in physiological chemistry. I would have qualified for a new program of medical teaching instituted at Johns Hopkins University at Baltimore, which consisted in a four-year course for admission to which a college degree was required. If I had been admitted and graduated, I would have been in the first class graduated under the instruction of that marvelous group, Halsted, Osler, Welch and Kelly. In fact, a few of the members of the class went down, but the offer of the new job was too exciting to turn down, when at the same time I could live at home and earn a "U" fee of twenty dollars a month with remission of tuition dues.

Dr. Beard has never received sufficient recognition from the University and students for his work. He was a man devoted to his duties and he was really the first man I remember who talked about high standards for qualification in the study of medicine. Of course, his idea was that a man who could cross his t's and put the periods in the proper places was qualified to study medicine. It was quite the contrary with Dr. Parks Ritchie, who was always interested in the

individual and believed that the men who had to make a living and study at the same time with an urge to study medicine should be encouraged. Even today I hardly attend a medical meeting but what someone, who has developed into a pillar in his local community, comes to me and says that he never would have graduated if it had not been for the encouragement and support of my father, particularly during his deanship.

Well, it was a great thrill to study in the medical school in contact with such a dynamic person as Dr. Beard, with the definite purpose of establishing a new course in physiological chemistry. The insistence of Professor Chittenden on proper notes was a lifesaver. The course was a success and I think it is proper to tell a story I heard when I first started to study medicine. A demonstration was being made by Dr. Beard, in this particular the Biuret test for the end products of proteolytic digestion, which turned the fluid in the bottom of the test tube a beautiful blue color. Dr. Beard held it up to the light and dilated upon the beauty of the reaction and then passed the tube around to the students for close inspection. The story is that the test tube returned to him full of tobacco juice. The making of the blood, bile, digestion and urine experiment sheets and the contact with the slaughter houses for material and with Fairchild Brothers, and Foster for ferments was really very exciting. It took a lot of time, but I had credits in organic and inorganic chemistry which I tried to obtain from affidavits of my teachers in New Haven. But Professor Bell was hard boiled and I had to pass both written and oral examinations.

At the time of graduation I was anxious to apply my skimpy knowledge of medicine to the individual. Dr. Sedgwick was then practicing on the Range and he was anxious to get into some teaching position, and to my great relief and joy, I was able to turn over the work to Dr. Sedgwick, and, I felt sure, to the great relief and joy of Dr. Beard. Then came internship at the City and County Hospital in Saint Paul, in common with my beloved and admirable friends and classmates, Dr. Warren A. Dennis, Dr. Walter Ramsey and Frank Warren of Faribault. There I again came in contact with students and continued to study under such men as Dr. C. A. Wheaton, Bob Wheaton, John Rogers, J. Rothrock, Dr. A. MacLaren and Theodore F. DeWitt. That was the time when the antitoxin of diphtheria was just coming in and a newfangled gadget called the x-ray tube. In fact, Dr. DeWitt operated upon the first case in phich an x-ray picture was the guiding factor in the operation. Warren Dennis assisted and I gave the anesthetic which was part of my job as an intern. I got so that I could choke the patient promptly with the old ether cone, and those memories make me so grateful for the great developments and refinements in the anesthetic technique of today. There was a case with a bullet in the lower leg, and the only x-ray tube in the state was over at the Physical Department at the University, where the x-rays emanated from an old, obsolete static machine. The patient was taken to the University where Professor Jones took the picture. There was a dark spot on the film, which located the bullet.

The time came to terminate my internship and the question of the future again arose. My father, who worked like a couple of dogs all his life, wanted me to do something easier than general practice, and he suggested the nose and throat specialty. He said, "You must do it—just look at those fellows, Harry. They stick a wire up a nose and pull out fifty dollars." Of course, this a libel on the profession, but I soon found that in those days of the atomizer, the fellow who used the strongest solution of cocaine had the best practice. But I did get to the point where I could clip off the tops of tonsils with the guillotine as fast as anyone in town. I think it all right to say this, to show you the marvelous developments which have been made in sinus work and ear work in the meantime. Dr. MacLaren and Dr. DeWitt I had known during my internship at the City Hospital, where Warren Dennis was acknowledged to be the top member of the intern group, particularly qualified in general surgery, so he went to one end of the old Lowry Building with Dr. Wheaton and I went to the other end of the building with Dr. MacLaren and Dr. DeWitt, to find that the bulk of our work was in gynecology. So I became the third man in the group of MacLaren, DeWitt and Ritchie, with Ritchie written in the finest letters at the tail end of the letter heads.

When the Spanish-American war broke out, I was appointed to go with the 13th Minnesota. My opportunity came when two members who were already in the Minnesota Regiment of National Guard decided not to go, leaving two vacancies. I jumped at the chance, because I had made little progress in the practice of medicine in a year and there was nothing to give up. But to my pleasure, I found that I was again third man in the medical corps and my immediate superior was my boyhood friend, the late Dr. Arthur Ayer Law. From the educational standpoint, the trip in the Philippines was a dead loss, but the rough and tumble practice, the meeting of many wonderful men in the army and the excitement of the campaigns and the midnight sick calls on the march, made quite an experience. I found that with the younger boys, sick and far away from home, the kind of pill I gave them was in no way so important as the way it was given and that the assurance that I was interested in the case really was more valuable than any medicine could be. So there was a two-year hiatus in my contact with medical students. I do not see so very much difference between them and the boys and students of today. They are all kids with a future and a purpose, who need a little bit of support—to use the expression of my beloved friend, Arthur Law—"a bit of a touch of the shoulder."

Of course, there was a little bit of advertising connected with the position as surgeon of the 13th Minnesota, and when I returned in a year, Dr. MacLaren told me that in the meantime Dr. DeWitt had decided to retire from the practice of surgery. You can imagine the thrill that was mine when Dr. MacLaren

offered me a formal partnership. Well, I was again in contact with students, because, out of his own interest and loyalty, Dr. MacLaren had been giving a Thursday morning surgical clinic at St. Luke's Hospital. This was the beginning of a weekly clinic which was a great part of our life, the preparation and accomplishment of which was constantly in the mind of Dr. MacLaren. Until the time when the University Hospital opened in 1912, I do not believe a clinic was ever missed. The cases were all private patients, but such was the control of Dr. MacLaren over his people that I do not remember a complaint ever having been made. The caliber of the clinic was always on his mind, and, while it started out to be nothing but an operative clinic, it was on his instruction that I started to form a laboratory, because it was not at that time the custom to have a hospital equipped with a laboratory. This was done at our own expense. The University was combed to find someone to act as a laboratory technician, and I was fortunate in finding, not a laboratory technician, but an artist from another department, Miss Lotz, who had the spirit, ability and initiative to learn the method of sections, and who trained herself in stenography and shorthand. So we began to send all the pathologic specimens to the laboratory to be classified and preserved in glass jars, in an effort to have museum material to maintain the clinic should the operative cases ever fail. The pathologic interpretation of our sections was more or less the weak part of the setup, because, although I had had some training in pathology with Dr. Wesbrook and his assistant, S. Marx White, there was always a feeling of uncertainty in pathologic diagnosis. On the old records I see the names of John L. Rothrock, Ernest Richards, Edgar Norris and a number of others. I had the idea of supplementing our operative clinic with surgical pathology: here is the gross tumor, here is the section, here is a statement of the case leading up to the condition. I had worked hard to gather a group of cases and had sections of the breast showing practically all the pathologic conditions then known. Dr. MacLaren was very much interested and one morning he turned the clinic over to me. On the table I had all the material, but during the morning I could not get the attention of the class and I was very much disappointed as I thought it was my fault for not putting some romance, as Dr. Chittenden had in his lectures, into the clinic. I had one friend in the class, whom I approached after the clinic and asked, "What was the matter?", and he said, "We are so sick of seeing dead things that we can't stand it any more," so all the material was only brought out on occasion. With Dr. MacLaren, the clinic always came first, but I remember my father talking about a colleague who had missed some hours with his students and who was being criticized by him for missing his engagement. His excuse was that he did not have any material, and I remember Father saying, "You must meet your hour. Just look at Jimmy Moore—all he needs is a bone—any old bone—and he can build a clinic on it," which he did, for he was in the same class with Dr. MacLaren with respect to his duties.

Well, the policy of the University changed, with the idea of eliminating the private class of individuals, and the plan of putting the operative clinic in the City and County Hospital of Saint Paul and the City Hospital in Minneapolis and the newly-formed University Hospital, which had been built through the very active work of Dr. James E. Moore. Even before the Elliott Memorial Hospital was built in its present position, a beginning had been made in some house over on Washington Avenue.

When I returned from the Philippines, my beloved friend, Dr. Alexander J. Stone, immediately asked me to come into his department of gynecology. Our offices were nearby and it was no uncommon occurrence to have him run into my office and say, "Harry, I have a lecture in half an hour at the University on such and such a subject, and I can't go. I want you to go over and take the hour." I think this is worthy of record, to show how loosely in some instances the formal didactic lectures were made. When the temporary hospital started, Dr. Stone came into the office and said, "There is a case on my service, with a vesicovaginal fistula and I want you to go over and sew it up. Well, of course, I had seen the operation when I was assisting Dr. MacLaren, and I at least knew where the parts were, but for any extensive experience, or taking the responsibility of such a new case, it was another example of the form of teaching of those days. I would like to add that the fistula in this case was closed, mirabile dictu.

Well, there came a time when the surgical staff was asked to resign, with the idea of appointing those on the service in Saint Paul and Minneapolis and at the University, thus revising the personnel of the faculty to give greater control to the University authorities. Dennis and I had become very close friends, probably for the reason that we were in different ends of the building and our cases did not often cross, so we were not competitors. We were left out on a limb, as a result of the changing of the faculty. We decided between us that we were good surgeons and qualified for appointment on the staff, so we made a trip to Minneapolis for a personal consultation with Dr. J. E. Moore, who was to be the head of the surgical department. It was an anxious time. I was sure that Dennis would get it, because he was the top man among us, and when I was also included, it meant a change-over from the gynecological department to surgery. Happily, I was finally appointed, and the staff was formed, with Dr. Moore as chief. Dr. J. Clark Stewart, whom I do not remember as having a formal appointment, was in effect, associate chief. There were two services, one red and one blue. Dr. MacLaren was chief of one, with his associates, Dr. Arthur Strachauer and Dr. Warren Dennis. The other service was headed by my friend and comrade, Arthur Law. I was the second man and Earl Hare third man. Dr. J. Clark Stewart was the first man to concentrate on the problem of cancer in this part of the country, and, of course, when the University Hospital opened, all the neglected cases from all over the State came in. So all the younger fellows

and particularly Earl Hare and myself became quite interested in these problems. Dr. Stewart taught that the only way to treat cancer was to destroy it. We were limited to surgical removal, when it could be safely done, or cauterizing, in position. It was a great advance when the cautery excision came in. Dr. Earl Hare was a real, competent anatomical surgeon and Dr. Stewart not infrequently turned over the problems to us, with the result that many of them had serious cosmetic deformities as a result of the treatment. It was this group that got me interested in the problems of repair, because when they went home with awful deformities, they were a bad advertisement to those in the community who had beginning malignancies, but who would be deterred from seeking treatment at the time of possible cure and would delay treatment for fear of a terrible deformity. So we began to think of making a repair some way, with flaps and skin grafts. When I see the marvelous work being done all over the country and at our place, I have to go back to the days, when, for lack of experience or direction, the result was not always satisfactory. It was a wonderful time for all the younger members of the staff, because it was truly a general surgical service. Before the time when gynecology and urology were sloughed off from the Department of Surgery for special teaching, we had to pitch in and do the work on our own, or more often under the direction of the senior members. For instance, Dr. Arthur Strachauer and I used to contest in our cystoscopic work to see who, in doing a pyelogram, could get the most collargol on the ceiling.

One story might be worth telling. It certainly had a great influence on my future work. On Arthur's service, there was a case of procidentia, which I decided was a typical one for a Watkins interposition operation. I had gone to Chicago, met Dr. Watkins under Dr. MacLaren's introduction, seen the operation several times, and, with Dr. MacLaren, had done a few operations, so I decided to try it. Being the first one of this kind in the hospital, the staff was present. You know, it is easy to get the vaginal mucous membrane off the bladder, it is difficult to separate the bladder from the uterus, but it can be done safely and easily up to the point of entry into the peritoneal cavity. In this case, everything went well up to the point of entry into the peritoneal cavity, at which time I could see myself entering the bladder and making a mess of the operation. So with extra care and timidity, time went by to a point where I could hear the staff changing over from the left to the right foot. Finally, Dr. Moore came up and remarked, "Well, Harry, what are you going to do next?" Even today, when I get into a blind spot in an operation, I can hear him say, "Well, Harry, what are you going to do next?"

Well, it was certainly a happy family. No one of the staff had an attitude other than consideration and helpfulness, and, as I look back, good surgery was done. Dr. Moore was a real leader who had the interests of the patients at heart. Of course, in our service, Arthur Law and I had so many things in common that we got along beautifully. On my part there was ever-increasing admiration for his beautiful, exquisite deftness in his surgical work, and I think I saw the same spirit with Drs. MacLaren and Warren Dennis.

Unfortunately, one day in our general rounds, which Dr. Moore characteristically designated as "Grand Rounds", when we saw all the patients, there happened to be three new cases of a congenital deformity known over the years as harelip and cleft-palate. I had seen Dr. Strachauer and Dr. Law do these operations, but I had never done any myself. Nobody seemed to be particularly interested in them, and Dr. Moore turned to me and said "Harry, why don't you see what you can do with these cases?" and thus came to me a problem which has interested me all the succeeding years. In one way it has been a deterrent to the development of a Department of Reconstructive Surgery, for although the other flaps and skin grafts had always been of great interest, these congenital deformities began to flood in in such numbers that there was really no time to do anything else; so when Logan Leven came to the hospital and indicated an interest in these problems, he was met with a reception cordial to the point of embarrassing him. We found also that there were a great many problems that neither one of us was competent to handle, and I found Dr. Carl Waldron to come over and help out. When I go back to the time when my father used to talk about "those tooth carpenters," and see the development of the dental school into a real medical science under Dean Lasby, Dr. Rudolph and Dr. Carl Waldron, I feel that this department has kept pace with the development of scientific medicine. I feel that, in retiring from the active staff, these problems are in most competent hands, with Dr. Leven, with the surest possibility of future development in the care of this group of cases at the university. I have always been most grateful to Dr. Waldron, because through him I have come in contact with an interesting group of men all over the country, who are devoting their lives to these problems on a specialty basis, an attitude which I could never bring myself to assume, for fear I would get bored and limited. I think I am imbued with the idea of the general practitioner in my attitude towards the problems of surgery. Dr. Wangensteen has called attention to the plastic department as being one of the best in the country. Well, I will say from observation elsewhere that it is not, but that it has that possibility.

So the service went until the War, when the formation of the Base Hospital decimated our staff, which meant that those of us who had to stay home had to double up in the matter of work, and also manage the didactic teaching. That was the time when the four-quarter plan was begun. One year I had to give a course on "Principles of Surgery" twice in one year, and I got so stale that I have put the word "principles" in the same class as the word "Parasang." Anyway, we survived and there was so much to do that we invited in fellows for a six-month service. I thus got to know a splendid group of the younger fellows who

caught the spirit of the University and contributed to the development of the Department. There were men like James Johnson, Roscoe Webb, George Dunn and many others who helped with the care of patients and participated actively in teaching.

This went on until we had some sad news. Dr. J. E. Moore was sick with pernicious anemia. Those were the days when treatment by transfusion was the accepted thing and Dr. Moore had back of him the whole student body, but all the care did not do any good and he finally died. It was a great loss to the University and the Department. I always thought it was quite a coincidence that dynamic men like Dr. Perry Millard and Dr. James E. Moore should both have died from a disease for which today so much can be done.

Outside of the active work done, one of the privileges of belonging to the staff was the opportunity of meeting and knowing and in some instances knowing intimately the newer and keener minds among the students. I think everybody who has been familiar with the student body agrees that the caliber of the students has improved right along. I think I notice a deeper interest on the part of the present classes, certainly a closer attention, and different conduct from the time when a student was taken from the first row and passed up to the top row by his classmates. Medicine has become a serious business, and the old rough-house days, while they were of fond memory, were not always conducive to scientific medicine.

Once in a while, we see some student who by his industry calls himself to the attention of every teacher with whom he comes in contact. It was great luck for the Surgical Department when Owen H. Wangensteen decided to become a surgeon, and his early promise as a student has been more than generously fulfilled. I think the status of our department is much stronger than most of the departments I know of elsewhere in the country, by the fact that our chief has been home grown, and I look with amazement and joy at the ability he has shown as an organizer, administrator and investigator of not only the academic but the surgical problems vital to the care of patients. He has made himself a top practical, technical surgeon. I am familiar with many departments in person, with the particular heads of the departments of surgery elsewhere in the country, and I can truthfully say that our department, at the present time, presages the top future medical school in the country.

I knew something of the problems of the deanship during the years when Parks Ritchie was Dean of the Medical School, and I want to congratulate Dr. Diehl on his assuming and carrying through what I know to be a tremendous job. Of course, his interest is in the school, but I think I will give him a little advice—to give particular attention to the Surgical Department.

I have talked too long and I want to say just a word in conclusion. I have seen three forms of teaching surgery:

1. The clinics on private patients, with the contributions of loyal men such as Dr. MacLaren, Dr. C. A. Wheaton, Dr. Alexander J. Stone and Dr. Harry O'Brien of St. Paul, Dr. Dunn, Dr. Moore, Dr. Dunsmore and Dr. Amos Abbott of Minneapolis, and others whom I haven't time to mention.

2. We had the half-time men on year-round service of the original staff. Dr. Strachauer reminds me that he and I are the only living members of the original staff.

3. The present setup consists of full-time men under the direction of Dr. Wangensteen.

I think under the present plan the patients get better and more expert and continuous care than ever before. I think that surely the opportunity and urge to produce something and solve many unsolvable problems is better carried on by the constant attention of the full-time men than by half-time men who have to divide their efforts between the demands of public work and the great personal problem of earning a living.

I can't conclude without a word about Dr. Archibald MacLaren, with whom I was associated for twenty-five years, during a period of great volume of work. I never could have afforded to give so much time to the University had it not been for his support and encouragement. Dr. MacLaren was in his conduct fundamentally and intellectually an honest man—honest with himself, and honest with his patients. One story may illustrate his attitude to his work. So often when discussing some case he would say, "Well, Harry, of course you can operate, but will you do the patient any good?" This has influenced me ever since. Even now when I have a problem of procedure across my consultation desk, the spirit of Dr. MacLaren shouts in my right ear the above statement. I have thought that if there should come a time when I had to advertise for patients that I would ask him to shout it in my left ear, where my hearing is not so acute.

I would like to plug Dr. Parks Ritchie, who was an ideal husband and father, and who, I think, carried with him the teaching of his Presbyterian minister father in his ideal of service to his patients. He carried in his little black bag, consolation, advice and a great fund of stories and quotations, which so many times emphasized a point or took the strain out of a controversy. Even his bill heads softened the blow, as around the margin were quotations, only one of which I can remember: "Hope is a good breakfast but a poor supper." I am sure this brought prompt payment of his modest charges.

I would like to take the time to pay my respects to a number of men, but it would not be pertinent to the Surgical Department, and so I will close, saying that I have been inordinately proud of my position, that it has been a wonderful opportunity and, when all is said and done, I believe that I got more out of the School than the School got out of me.

Dr. Wangensteen

DR. J. FRANK CORBETT was born in Chippewa Falls, Wisconsin. He received his M.D. degree from our Medical School in 1896. Doctors Corbett and Ritchie were classmates. Doctor Corbett's first publications were essentially bacteriological in nature and dealt with typhoid fever and the water supply in Minneapolis. Doctor Corbett was the first Surgical Experimentalist, west of Chicago and Milwaukee, where Nicholas Semm had preceded him in a similar interest. Doctor Corbett established, in our Department of Surgery, a fine Experimental Laboratory. There he worked ardently for years, employing combinations of pathologic and physiologic approaches to surgical disorders. Between the years 1908 and 1915, he published several papers on experimental aspects of surgical problems. His chief contributions related to shock and the behavior of the adrenal glands in shock and to blood vessel suture. He concerned himself also with the problem of adhesion formation after laparotomy. With World War I, Doctor Corbett's interest focused sharply on neurosurgery. A score of classes of our medical students have profited immensely because of Doctor Corbett's studies in nerve repair. During my days as a medical student, Doctor Corbett was one of our most esteemed and best loved teachers. When Doctor Corbett left the University as a full-time teacher to enter practice and take over the duties of Surgeon-in-Chief of the Minneapolis General Hospital, the senior class in medicine, of which I was a member, presented Doctor Corbett with a loving cup as a token of our admiration and regard for him as a teacher. Through the years, his interest in teaching has not flagged. A year ago, Doctor Corbett became Clinical Professor Emeritus. Many of us, who are here tonight, got our first orientation in the fundamental principles of surgery from him. It is now our pleasure to hear from Doctor Corbett.

J. FRANK CORBETT, M.D.
Minneapolis, Minnesota

Dr. Diehl, Dean of the Medical School; Dr. Wangensteen, Chief of the Department of Surgery; members of the Surgical Staff and my associates in the profession, I greet you. Tonight I do not have to rely on the comfort one gathers from reading the "Compensation of Age" in Cicero's *de Senectute*. Your assembly with its kindly spirit has done so much to reconcile me that I do not feel the age of retirement is anything to look upon with regret. It is rather a joyful occasion. I can now look upon advancing age through the eyes of Cicero who tells us it is the ripening of seed or fruit that is as important in nature's cycle as the germination of the seed or the blossom.

I came here to study medicine in 1893 as a student. At that time the Medical School was housed almost in its entirety in a building known as Medical Hall, a brown stone building on the old campus. A long shed-like building housed Chemistry and Histology and Pathology in addition. I shall beg leave to call your attention to the men who at this time gave their services to the field of surgery. As I journeyed along as student and later as a teacher, there seemed to be three distinct cycles of men. First the pioneers. These were the teachers of my student days. Second, those who came to surgery through apprenticeship. And third, the Graduate School of Medicine.

I shall detail the names and achievement of the pioneers, men who were giants in the profession, men who by inherent ability, perseverence and hard work, aided by good judgment and skill, achieved the seemingly impossible. They had no training except such as was dug out by their own effort of a very incomplete literature existing at that time. Without the x-ray or the laboratory they made accurate diagnosis and proved their findings by operation. Aided by their fingers and other senses only, they diagnosed pathology well, that today with all our assistance is a difficult problem.

Among the pioneers Perry Millard, originally of Stillwater, a graduate of Rush Medical School in 1872, was in every sense of the word a prairie doctor. He was Dean of the Medical School in 1888 to 1897, and Professor of Surgery. His lectures were colored with diathesis and dyscrasia, somewhat incomprehensible to most of us. But whatever he lacked in delivery or erudition he compensated for as an organizer. He did at least three things. First, he was the author and inspiration of the laws that govern the practice of medicine in the State of Minnesota. Second, he started the machinery for the consolidation of all the privately owned medical schools in the state into the University, an undertaking not completely consummated until 1908. This was accomplished by surrender of the charters of these poorly equipped private medical schools. Millard made this possible by introduction of an act of legislation to concentrate all medical teaching in the hands of the University. As a result, a medical school in the University was established on a firm foundation. Third, it was made possible to place Medical Hall on the campus largely through his efforts. A large amount of money was contributed by Millard for this purpose.

Of a different type was Dr. Charles A. Wheaton, a graduate of Harvard Medical School in 1877, a man of pleasing personality, with an almost perfect physical frame. His clinics were attended with utmost fidelity and enthusiasm. As we sat on the benches he brought to light with his scapel the pathology that he knew before was there. He would tell us the history, the physical findings, the reasons for diagnosing the condition. This was done by simple physical examination aided by a great fund of knowledge concerning the natural history of the condition under consideration and all controlled by excellent judgment. Keen observation, a good memory of medical pictures that he had stored in his mind and judgment were his great equipments. One realized that only an exceptionally well-gifted man could be a surgeon when they watched Charles Wheaton.

The man whom I knew most intimately on the surgical staff was James Dunn. He, too, was a prairie doctor but by hard work, close study and determination became a great master of surgery. I will detail somewhat his life. He had supported himself by manual labor at the age of fifteen and struggled through Normal School. He managed to work his way through the medical school, graduating from the University of the City of New York in 1878. His record next shows him as Professor of Natural Science in Mankato. Later

he started to practice in Shakopee. A visit to Europe was provided for and made in 1883 and he attended Vienna and Heidelberg. The Minnesota Hospital College, one of the private institutions later amalgamated into the University Medical School, had for its domicile the Winslow House. Here, Dr. Dunn served as Professor of Genito-Urinary Diseases from 1885 to 1889. Dunn was a self-made man, an indefatigable worker throwing into his work an energy that often exhausted him. He was fearless in his honesty, always ready to uphold what seemed to him right in his dealings with his associates. All I want to say is—he was my friend. As I sat on the benches of his operating room I realized that he was master of his profession. Without training he had absorbed by careful study the genius of the masters of Europe. I remember pictures of Von Langenbeck and Von Bergmann that hung in his office. Virchow, Billroth and Fenger were his constant companions, though miles separated them physically.

Dr. A. W. Abbott worked his way through two years at Dartmouth, enlisted as a drummer boy in the Civil War. He fought his way through the College of Physicians and Surgeons in New York. His first educational activities consisted in teaching anatomy at the St. Paul Medical College, an institution later incorporated with the University Medical School. In 1881 he was one of the Founders of the Minnesota College Hospital, where he was Professor of Anatomy and Gynecology. He was a close student of pathology and with Dr. J. Clark Stewart and F. F. Wesbrook, founded the Minnesota Pathological Society. His records are a model in every respect. Over fifty contributions are recorded, among them the classic on intussusception.

Dr. F. A. Dunsmoor thrilled us with his brilliant operative work. His quick judgment and clever technique were never surpassed. He too was a Minnesota product who conquered by his own ability. He was genuine and remarkable in friendliness and interest in every one.

Dr. Arthur Law received his training from Dunsmoor that stretched through a period of years.

J. Clark Stewart originally taught histology and pathology, and was one of the most generous hearted men that ever lived. He set aside his own personal prestige for the good of the University. Were it not for his sacrifice of self, the Department of Histology and later the Institute of Anatomy and the Institute of Pathology would never have come into existence. Again he stood aside for me, that I might develop the Laboratory of Experimental Surgery. He later worked into a study of tumors and before his death the tumor clinic at the University Hospital was established. He had wide vision and unselfishly stimulated others to develop opportunities that he created for them. His collection of lantern slides of tumors was enormous.

James E. Moore, a pioneer, developed but was not trained in the field of railroad surgery, with its amputations and other difficult problems. There was no one to train him. He trained his senior, Dr. A. A. Ames. He developed other men, most of whose names appear in the second group—the Apprenticed Surgeon. We all, of that era, owe him a great deal, not alone for the voluminous literature and his talks in lecture rooms but even more for the interest and help he gave us in his private office and in his consultations. I think Dr. Ritchie would never have done his cleft palate work had it not been for the impetus Moore gave him. His most classic publication was on osteomyelitis, selected from a long list.

Archibald MacLaren leaves a pleasant memory. I will quote, "A host of men can testify to the profound impression given not by any showy demonstration but by imparting to others, simply some thing of his own knowledge, his remarkable and discriminating conversation, his enthusiasm, his high ideal and fine ethical standards which were a part of him." (Charles Lyman Greene).

While the next man of whom I speak was not a surgeon, I must pay tribute to Dr. Parks Ritchie, Dean of the school immediately after my undergraduate days. He was a delightful man, always interested in all of us, our friend, our counsellor and our idol.

Both Charles and William Mayo were pioneers who succeeded past wildest dreams, through their inherent ability. Their lives are all too well before you to make comment necessary. While they themselves were at one time pioneers, their influence was chiefly brought to bear when the graduate school was established, and they finally developed all the laboratory methods, to the ultimate.

As to the early teachers, these self-made courageous resourceful supermen were pioneers. Only an exceptional man could do what they did with their resources. They had none of the modern aids to diagnose, such as the laboratory, the x-ray, the electrocardiogram, or even the sphygmomanometer. The work of the biochemist, the study of the blood and accurate means of determining bodily function that we have today were then unknown. Blood examination was seldom or ever done. Determination had to be made with the fingers and eyes and ears of the diagnostician and these meager data reasoned into a conclusion. The tape measure took the place of the x-ray. I have actually seen these men make a diagnosis from the appearance of the patient. I am inserting a discription of shock that illustrates what I mean by stored pictures that were drawn upon. "The injured man lies perfectly quiet and paid no attention to anything about him. His face was drawn and peculiarly elongated, the forehead wrinkled and nostrils dilated. His weary lusterless eyes were deeply sunk in their sockets, half covered by drooping lids and surrounded by heavy rings. The pupils were dilated and reacted sluggishly to light. The eyes had a glassy and vacant expression. The skin and visible mucous membranes had a marble-like pallor. Large drops of sweat stood out on his forehead. The temperature was subnormal. The sensibility of the entire body was greatly reduced. The patient reacted slightly to only painful impressions. No spontaneous movements were made by the patient. On repeated and urgent requests he showed he could

execute limited brief movement with his extremities. The almost imperceptible pulse was rapid, irregular and unequal. The arteries were narrow and of low tension. The patient answered slowly, reluctantly and only after repeated questioning. On repeated questioning the patient complained of cold, faintness and deadness of all parts of body. The respiration was irregular, abnormally deep sighing respiration interchanging with rapid and superficial ones."

Dunsmoor recognized typhoid by its odor and with certainty. Moore by pressing the limb of a patient, could determine osteomyelitis. The cry of an infant told Abbott of intussusception that he verified by feeling the abdomen with his trained finger. Dunn could locate stone in bladder by the click of his sound. In the same way kidney stones and ureteral stones were recognized. Again, Moore made accurate pictures of his fractures by measurement, by position of limb, by reaction of muscles aided alone by his memory and knowledge of other cases. Bone tumors were diagnosed without x-ray. Gangrene was predicted by the peripheral pulse. These men adapted laboratory methods as soon as they presented. Dunn's x-ray equipment consisted of an old x-ray machine and many glass plates. Sometimes he obtained good pictures of a Colles' fracture by the sweat of his brow. Cancer of the stomach in the early stages was recognized by considering the story of the development and by the appearance of the patient. The color, anemia and loss of subcutaneous fat was taken into account. In appendicitis, physical signs alone and progressive history of the case gave these men courage to operate. It is true that they had microscopes and test tubes but these things had later to be devoloped into useful instruments. Basal metabolism was undreamed of. Goiters were recognized by their clinical syndromes and classed accordingly. Such simple things as loss of weight and strength, tachycardia, tremor, temperature of skin and exophthalmos led to the correct answer.

These men established the department of surgery and then took upon themselves the training of assistants and later practically all of these apprenticed men became surgeons. I had the opportunity of close friendship with John B. Murphy, Harvey Cushing, Alexis Carrel, Charles Frazier, Dean Lewis, Carl Huber, an anatomist with a surgical mind, the Scotsman Binnie, Robert Coffey, the Mayos and also Crile, who visited me at the Experimental Laboratory. I received much from these men but their glory does not lessen the attainment of our Minnesota pioneer surgeons. This is true too of European surgeons, whom I met casually at the International Congress of Surgeons.

Intestinal obstruction seemed to be the stumbling block of the older men and remained so until Wangensteen, a product of the Graduate School, wrote his thesis. Yet Dunn handled this problem nearly as well. A man not connected with the University, my Preceptor as a student, Dr. W. E. Rochford, acquainted me with principles of surgery, a subject I had the pleasure to teach later. I wish to call attention to this because of the debt I owe him.

After graduation I entered almost immediately the teaching ranks and the second transitional group, which I have termed training by apprenticeship. By this I mean, they spent three or more years training under a surgeon. These men associated as teachers were—Arthur Law, H. P. Ritchie, R. E. Farr, A. C. Strachauer, Warren Dennis, A. R. Colvin and myself. Warren Dennis stands out as the brainiest and brightest man in my class. He was a hard worker, searched after truth, and was honest and brilliant in his work.

Arnold Schwyzer, I put in a class by himself. Trained by Kocher, he excelled his master in all he did. He brought not only medical training from Europe to America but the general culture as well. He is broad in his accomplishments, as he is superior in surgery.

With mere mention of these men whose efforts are familiar to you all I will pass to the Graduate School which I will designate the Modern Miracle. The graduate school has taken a large number of medical graduates and trained them in three years so that they are as far advanced in the science and art of surgery as we were after a lifetime of effort. This has been the product of the Graduate School and the Mayo Foundation. Will and Charles Mayo and Dean Ford had the vision to plan this and the ability to make the dream come true. Four years in undergraduate school and three years postgraduate work in the laboratories of the fundamental sciences and in the laboratory of the bedside and in the operating room have not only laid a foundation but actually developed men into surgeons in this short period of time. I have watched these men in the Experimental Laboratory and worked with them in the University Hospital and often obtained more from them than I gave. As an example, I will point to Dr. Wangensteen, who mounted to dizzy heights almost immediately after obtaining his Ph.D. and demonstrated his ability as a teacher of surgeons. With him he has gathered a group of men, of whom much the same might be said. They are present and you know them. Almost all the strategic positions in the Department of Surgery body are filled by men trained in the Graduate School. I remember Dr. Wangensteen as a student. It was his Class that presented me with a loving cup that I keep in my office where I can see it every day. It is very dear to my heart and is one of my cherished possessions.

Dr. Wangensteen

DR. ALEXANDER R. COLVIN was born in Teeswater, Ontario. His medical training was secured at McGill University in Montreal, where he graduated in 1894. Doctor Colvin became identified with the Department of Surgery more than forty years ago, having been appointed Clinical Assistant in 1900. Doctor Colvin's first publication, in 1902, dealt with lodgment of a coin in the esophagus. Early in his career, Doctor Colvin felt an urge to give special attention to surgical pathology and spent time pursuing this interest abroad in the Surgical Clinic of Professor Mikulicz at Breslau, as well as with Doctor Bloodgood at Baltimore. Doctor Colvin's writings and teachings have reflected directly, throughout the years, this keen interest in pathology, as a proper background for surgery. Doctor Colvin's

interest in teaching has become a matter of common knowledge amongst his associates. For years, without any emolument from either the University or the Ancker Hospital, the place of his chief activity, he has given freely of his time to students, staff and patients. I am told that he continues still to devote more time to his activities at the Ancker Hospital than to his practice. Doctor Colvin has learned that the tissues of the poor are equally as interesting as those of patients who can pay. The influence of Doctor Colvin's activity and precepts upon the Ancker Hospital and, therefore, also upon the Medical School as well, is difficult to measure. It is the product of a lifetime of earnest, high-minded endeavor, motivated by uncompromising principles of honesty and integrity. Men like Doctor Colvin build institutions. Teaching and the Ancker Hospital have been his life's work. It is my privilege now to call upon Doctor Colvin.

ALEXANDER R. COLVIN, M.D.
Saint Paul, Minnesota

I have more to be thankful for than the preceding speakers for, having come, a stranger, from Canada, the great kindness and warm-hearted reception accorded the young doctor when he began practice in Saint Paul in 1896 have always been and always will be remembered with great appreciation and pleasure. I soon learned that the profession in Saint Paul had a nationwide recognition for good fellowship. Harry Ritchie's father was among the group of men in Saint Paul at that time connected with the medical school and he soon became dean of the medical faculty. Before long he invited me to become an assistant in the Department of Surgery, and again I was made to feel the kind consideration of a big-hearted man. It is fine to be associated with the third generation in the person of Harry's son, Wallace, who is working with me at the Ancker Hospital, and it is an association which I feel sure is mutually pleasant.

Harry Ritchie, Warren Dennis and Walter Ramsey were interns at the City and County Hospital when I started my work and it was a pleasure to form such friendly relations so early in my life in Saint Paul. Very soon Harry, Warren Dennis, Jud Goodrich, John Rogers and I were dissecting during the winter months in the morgue, and I was spending much time doing dog surgery with Dr. Price, a veterinarian from McGill. He stole about a dog a week.

When I first came to Minnesota I was delighted to find its hospitals and medical profession so far advanced. The comparatively new St. Joseph's, St. Luke's and City and County Hospitals were then on a par with the hospitals of the older medical centers I had left, and I soon discovered that in the profession in the Twin Cities and at the medical school were men of outstanding character and ability. The number of Minnesota graduates of fine professional attainments in this and surrounding states is evidence of what I have just said.

I wish to express at this time a tribute to a man who made a profound impression upon me. I always felt that it would be difficult to convey in words what I felt and still feel for Dr. Charles Wheaton. Dr. John Rogers, first his assistant and later his partner in practice and himself a fine surgeon, spoke of him in *Surgery, Gynecology and Obstetrics*, in 1923, as one of the famous American surgeons. I was glad to find this writing done with so much feeling. It will repay you to look up this article if you are interested in the history of the Department of Surgery at the Medical School. I recognized at once a master surgeon much of the same type with whom I had been associated in my two years of house surgeonship at the Royal Victoria Hospital in Montreal.

Dr. Wheaton had come to Minnesota in 1879, a graduate of Harvard Medical School having interned under Cheever at the Boston City and Massachusetts General Hospitals. He worked for many years in a large general practice and became recognized as the leading surgeon between here and the Pacific Coast, and as Dr. Rogers has well said, "he put surgery on the map in the Northwest." He had an earnest, sincere, kind and compelling affection, was wise and sympathetic in his acceptance of his fellows, interested in and helpful to the younger members of the profession, and a hard worker. He was one of the founders of the medical school and head of the surgical department for many years. His was a striking personality when at work, compelling attention by virtue of a blending of the characteristics I have tried to describe accompanied with a mastery of surgical science. He held his science high and was possessed of that becoming humility, an attribute of all great men in medicine who think of the magnitude and responsibilities of medicine.

I became associated with him in practice at a later time when he was relinquishing his hold but it was during my first years in Saint Paul that I really learned most from him and received much inspiration as a privileged on-looker, and in a sense a postgraduate student. I felt that I was still privileged to continue working under the same quality of leader that I had left behind at the Royal Victoria Hospital.

"I have," said he "worked alone," meaning that in his early work he lacked the association of master minds. One of the few times I saw him display marked emotion was on the occasion of a visit of Dr. Maurice Richardson of Boston with whom he had graduated and interned in the Boston City and Massachusetts General Hospitals under Cheever. I was away over in Breslau, Germany, in 1903 when the renowned surgeon, Mikulicz, made a trip to the United States to attend a surgical congress. On his return, in speaking of American surgeons, he told me that "Richardson was most congenial." I asked him if he had met Dr. Wheaton. He replied that he had and that Dr. Wheaton had made a great impression upon him.

Doctor Wheaton was a man who with a larger and wider association would have risen to unknown heights. James Dunn, James Moore, Everton Abbott and Arch MacLaren, who were associated with him in the department, were all men esteemed and appreciated by their fellows.

Dean Lyon once said, "We will make our own chief of the department from among our own graduates," and in the course of events and in the development of

the surgical department the school was wise enough to encourage and promote an able young man. Doctor Wangensteen was a fortunate choice and along with the school has now come to be classed among the leaders. It is not amiss to say that although he is much younger than the older members of the department he has earned their respect, admiration, and loyalty.

Dr. Wangensteen

DR. A. C. STRACHAUER, my preceptor and predecessor, was Chairman of the Department of Surgery over a period of several years, when the activity of our colleagues, whom we are honoring tonight, was at its peak. Dr. Strachauer was in large measure responsible for the arrangement which assured men in the Surgical Fellowship plan of training, real opportunity. Many of the early Fellows in Surgery, including myself, are beholden to him for the advantages which we enjoyed. It is fitting that we should hear from Dr. Strachauer.

ARTHUR C. STRACHAUER, M.D.
Minneapolis, Minnesota

Dr. Wangensteen, honored guests, and fellow colleagues:

It is a great pleasure to participate in this occasion. Dr. Colvin was one of my teachers. He was held in very high esteem by the student body. I very well recall his clinics at the Ancker and St. Luke's Hospitals. They were very carefully prepared and conducted as though for an important scientific body. Groups of patients illustrating various phases of a condition, x-ray plates, and pathological specimens would somehow be gotten together. I can see Dr. Colvin in my memory now with the articulated bones of an extremity in his hands, carefully going over the subject for presentation. His teaching had mostly to do with the surgery of the extremities and conditions of vital importance to general practitioners. He was a sound practical teacher and absolutely devoid of the quality of show-off. To this day I have never seen him operate, but he did succeed in teaching and stimulating his students. He has given a life-long devotion to the welfare of medical teaching, and incidentally to the welfare of the Ancker Hospital. It is my understanding that he installed the first x-ray equipment in that hospital and that he fathered and mothered and operated the same for many years.

Doctor Ritchie was likewise one of my teachers. I first saw him in the operating rooms of the St. Luke's Hospital participating in the clinics conducted by that grand gentleman and surgeon, Dr. Archibald MacLaren. When the Elliot Hospital, that is, the first unit of the University Hospital, opened the surgical staff consisted of Dr. James E. Moore, Chief, Drs. MacLaren and Arthur Law, assistant chiefs, Doctor Ritchie, Earl Hare, Warren Dennis and myself as associates. I, therefore, had the opportunity to meet Dr. Ritchie professionally and intimately a number of times every week over a period of years. I am glad I had the opportunity to know and appreciate his sterling worth. I think of Doctor Ritchie as an able surgeon and successful teacher. He has always been particularly interested in helping the younger men in surgery. Over all these years, and with plenty of opportunities obtaining, I have never known Dr. Ritchie to speak an unkind, uncomplimentary or slighting word regarding any fellow colleague. Incidentally, he has earned national recognition in plastic surgery and the love of his fellow men.

Doctor Corbett has always been the typical scientist. His approach to surgery was, therefore, naturally the scientific one. He has always been fussing with collections of something. When I first knew him he was collecting and growing bacteria in the capacity of city bacteriologist in Minneapolis. He was also working very hard on a big pipe at that time, and I know from first hand information that he is still working on it. Doctor Corbett organized and conducted the first respectable laboratory for surgical research that we had at the University. You all know how devotedly and successfully he labored in that field. He also had a surgical service at the University Hospital over a period of years, at the same time I was similarly occupied. Doctor Corbett has always wanted to know the whys and wherefores. He has been an outstanding inspiration to the student body. Doctor Corbett has, as long as I have known him, been a great collector. His office is a veritable museum. He has collected all sorts of things—minerals, fossils, pathological specimens, and what-not. His collection of Thompsonites and North Shore Agates is one of the most complete in existence. During the years that he has been engaged in private practice, he has been collecting gall bladders, kidney stones, brain tumors, friends and fees and every sort of specimen he could get.

We owe much to the teachings and inspiration of these three teachers. I wish them all health and happiness and a continuance of their usefulness.

Dr. Wangensteen

ABOUT fifty years ago, two brothers trained in the art and science of surgery in Switzerland, came to the Twin Cities. Their influence upon the practice of surgery in this community has been real. One of them, Dr. Arnold Schwyzer, is here tonight. He was identified with the Department of Surgery for a number of years as Professorial Lecturer and became an emeritus member of the department a few years ago. Everyone admires and respects him for his profound knowledge and his scholarship, as well as for his unusual ability as a surgeon. I hope that Doctor Schwyzer will be good enough to say something on this occasion.

ARNOLD SCHWYZER, M.D.
Saint Paul, Minnesota

On hearing the addresses of our three guests of honor I am particularly impressed by the fact that they —every one of them—spoke practically only of others, their teachers, their friends, their colleagues. This modesty is almost going too far. We came here to celebrate *them* for what *they* did and accomplished. When I came to Saint Paul in 1891 there were very fine men here at the head of our medical profession,

but the university was still anything but a finished school. Much, very much labor was needed to make it a real school. Sure enough a good beginning was made and men like Jim Dunn of Minneapolis and Charles Wheaton of St. Paul were towering men and great surgeons of splendid surgical attainments and keen intellects. But so much was still needed, especially in pathology, microscopy, experimental work, refinement of diagnosis, etc. And this was undertaken and accomplished by the generation of our honored guests. They put heart and soul into their work and these are not words of oratory. Just look at the results. Look at the rows of our teachers, recognized far and wide. With that generation our university got on the map. And look at the wonderful buildings all around us. We have mighty good reason to be proud of all this development.

The three gentlemen whom we are here to honor, worked for many, many years on this development. Here next to me sits Doctor Corbett. His keen and clear eye, speaking of wisdom and understanding, his kindly smile revealing a heart made for friendship, his interest and inquiry into many fields outside the professional studies, . . . well, you have just heard of a present of appreciation which his university friends gave him. Why? Because besides recognizing his professional abilities and accomplishments they just simply love that man. But let me tell you, if his Saint Paul friends were to pile up their love for him I know that pile would not be shorter than the one of his home town.

And here in the middle of the head table sits my old friend, Harry Ritchie. His father in my earliest days in Saint Paul was very kind to me. He was an outstanding member of what we call the old guard who gave Saint Paul the splendid reputation of professional harmony of which I had heard in Indianapolis before I ever reached Saint Paul. Dr. Harry is so infernally modest that I know he would rather have me talk about his father than about himself. You all know he is the personification of modesty. It looks inconceivable that he could have an enemy. So one is helpless, one just has to love him. You all know what he has accomplished in some special fields. For fear of making him uncomfortable I will only say, if I had a brother or a sister across the ocean who had a child with a cleft palate, I should try to have them come over here.

Then finally over there is Doctor Colvin. Here I am in a ticklish position. If I said too many nice things about him no matter how well to the point, he might even get sore. Well, we have been riding on horseback together weekly for over thirty years, summer or midwinter. On these long rides we discussed just about everything. Regularly our experience of the past week was gone through. We talked of interesting cases and dissected failures. General human problems came up and also medical men were sized up. One thing we always agreed upon was that besides knowledge, experience and technique it was of utmost importance that the surgeon have character, character to guide him earnestly and honestly in his dealing with patients. My life—let me say no more—has most decidedly been richer through this association.

So here we have three men with us tonight of whom the university and we of the surgical group in particular have good reason to be proud. They put their shoulders to the wheel when the university was in its adolescence. And the result is that we can look with confidence into the future. Not only this! We are very proud of our school of today as we see it leap into the lead of schools. Doctor Wangensteen and his co-workers merit our heartfelt thanks. One of my sons, as a lowly intern, learned more in one short year than I thought feasible, and they learn to work and work hard. If we were across the water, and had, as is the habit over there, some beer in front of us, I should lift my mug high into the air and shout a hurrah for our university and our medical school.

Dr. Wangensteen

IT would not be appropriate to conclude this meeting without a word from our Dean, Dr. H. S. Diehl. The Medical School, under his leadership, has forged ahead. He has gained the complete confidence of everyone connected with the Medical School and the feeling of *espirit de corps* was never better in the school than now. Everyone who knows Dr. Diehl feels sincerely that under his guidance the Medical School will grow and prosper.

This has been a happy occasion. I am certain that I bespeak the cordial sentiment of the members of the Department in congratulating Doctors Colvin, Corbett and Ritchie on their many years of faithful and loyal services to the Department, the Medical School and the university—years rich in accomplishment. My colleagues, I know, join me in the hope that you may live long to continue the work you love so well, and to enjoy the esteem and admiration of your colleagues and friends. I shall now ask Doctor Diehl to adjourn the meeting.

HAROLD S. DIEHL, M.D.
Minneapolis, Minnesota

Honored Guests and Colleagues:

I consider it a great honor and privilege to represent the Medical School upon this occasion which marks the passing of a significant milestone in the history of the Department of Surgery. Our distinguished guests have in their remarks and reminiscences given us a picture of the development of the Department of Surgery from its very beginning up to the present time. They have recalled from the past to parade in review before us the master surgeons and distinguished teachers who laid the foundations for the splendid Department of Surgery of which our Medical School is so justifiably proud. You will note they said but little about physical facilities, realizing that it is primarily personalities and spirit that make an institution outstanding.

In truly characteristic fashion also each one of our guests has told his story as though he himself were a spectator and not a major contributor to the building of this Department and this Medical School. From my own personal contacts with this school, which from student days to the present time have already covered

twenty-seven years, I can vouch for the fact that Dr. Colvin, Dr. Corbett, and Dr. Ritchie have played major rôles in the life of this institution and have written their names indelibly into its history.

As to the present status of this department to which these men have devoted a major portion of their professional lives, I have no hesitancy in saying that it ranks well with departments of surgery anywhere. In spite of a relatively meager budget, a small salaried staff, and limited facilities for research, this department has been able, due to a splendid spirit and a loyal and competent staff, both full time and part time, to carry on not only a sound teaching program in surgery at both the undergraduate and graduate levels, but also an active program of important original investigation. Dr. Wangensteen and his associates, most of whom were trained by the men whom we are honoring this evening, are conducting a Department of Surgery which is a credit not only to the Medical School but to the University of Minnesota as well. Such a department reflects the vision, the sound judgment, the idealism, and the ability of the men responsible for its development.

Looking toward the future of our Medical School we have every reason to be optimistic. This school is stronger today than ever before in its history and those of us who are responsible for its administration will do everything in our power to carry on the splendid institution which you and your colleagues of the faculty have built. As to the Department of Surgery I am sure that none of us has any misgivings so long as it retains its excellent staff and continues under Dr. Wangensteen's able leadership.

In conclusion, speaking as one of their former students, I want to assure Doctor Colvin, Doctor Corbett and Doctor Ritchie that through their service to the Medical School they have won the respect, gratitude and affection of generation after generation of students. No teacher asks any greater reward. Individually and collectively you gentlemen have rendered all the service that any institution has a right to ask and you have reached the official University age for retirement; yet we still need, and we hope that we may have, your continuing and active interest, support and participation in the affairs of the Medical School and Department of Surgery.

CLINICAL-PATHOLOGICAL CONFERENCE

MINNEAPOLIS GENERAL HOSPITAL

Frank C. Andrus, Pathologist

MYXEDEMA AND CONGESTIVE HEART FAILURE

Presentation of a Case

The case is that of a seventy-seven-year-old white man who was admitted to the Medical Service of the hospital on July 31, 1941. He stated that he had been previously well until about one month prior to admission at which time he first noticed edema of the ankles. Approximately the same time, he noted some swelling of his hands. He had had exertional dyspnea for seventeen years which he attributed to his being so markedly overweight. This had been growing worse prior to admission. He had seen a physician who sent him into the hospital because of the ankle edema. He had seen this same physician about fifteen years previously who had examined him and stated that his heart was normal at that time. Past history revealed that he had had polyarthritis at the age of seven and again at fifty-six years. He had not been forced to bed during either of these attacks.

At the time of admission to the hospital, he was seen to be a well developed and markedly obese white man weighing 215 pounds. He did not appear to be acutely ill. He stated that he had been obese for many years. He showed some impairment in hearing which, upon questioning, revealed that he had had this difficulty for about six years. It was noted that his voice was deep, suggestive of that of a patient suffering from myxedema. Upon direct questioning, he stated that his voice had always been deep as far back as he could remember and that he had noted no special changes recently. His memory was fairly good; he answered questions quickly and intelligently. It was noted that there were purplish-reddish, discolored, sunburned areas on the skin of the hands in a symmetrical distribution resembling the change seen in mild pellagra. There was some puffiness about the eyelids. The skin was pale and had a yellowish color. There were myxedematous areas in the supraclavicular region on both sides. The Achilles reflex was definitely slowed. The skin seemed to be rough and dry. Examination of the chest showed hydrothorax on the left. The heart was slightly enlarged to percussion. A systolic murmur was heard over the base of the heart which was not transmitted to the neck vessels. A diastolic murmur could not be heard. The first sound at the apex and the second sound at the base were very faint. There was no systolic thrill palpable at the base of the heart. The pulse on palpation over the radial artery had a normal quick rise and fall and did not suggest the slow rise and falling pulse of aortic

stenosis. An electrocardiogram showed some lowering of the voltage, negative T_1, and increased P-R conduction time. There was a pitting edema of both ankles. There was no edema of the hands although he stated that his hands had been swollen. There were no xanthomata of the skin. The blood pressure was 128/60. The venous pressure was 12 cm. of citrate solution.

Laboratory Work.—The hemoglobin was 83 per cent with an erythrocyte count of about 4,000,000. The urine contained only a trace of albumin. The plasma proteins were normal. The blood cholesterol was elevated to 357 mg. per cent. The basal metabolic rate was minus 30 per cent.

Course in the Hospital.—The patient was digitalized during a period of forty-eight hours with good response. He had a good diuresis with disappearance of the edema and decrease in the dyspnea. He had lost 13 pounds in weight. A thoracentesis was done and 1000 c.c. of fluid were removed from the left pleural cavity. On the fifth day after admission, August 5, 1941, another basal metabolic rate was taken which was minus thirty-two per cent. Thyroid was not administered at this time. On August 12, 1941, the basal metabolic rate was minus thirty-five per cent. At this time he was given one-half grain of desiccated thyroid extract daily. He was kept on this regime for three days. He felt well during this period on a half grain of thyroid extract. He improved so the dosage was increased to one grain daily. At this time his heart seemed to be very well compensated. Nine days after starting thyroid, the patient became very dyspneic, râles were heard at the lung bases. There was no peripheral edema and the venous pressure was 9 cm. For six or seven days previous to this attack, his urinary output had been dropping and varied between 150 and 350 c.c. daily. His venous pressure had dropped to about 8 cm. before we started thyroid extract. The following day he had several severe attacks of syncopy. During these attacks he became very dyspneic, faint, and weak. The pulse rate was around 60 per minute. He got cyanotic. All medications were stopped immediately at this time. The following day he continued to have severe attacks of syncopy and began having Cheyne-Stokes respirations. The blood pressure was 108/70. The blood urea nitrogen was 16.5 mg. per cent. He was given aminophyllin because of his syncopy, dyspnea, and cyanosis and later papaverine was administered. For the next two days he was entirely free of syncopy and seemed to be improving. However, again fluid was found in his left chest. The venous pressure at this time was 11 cm. A basal metabolic rate was minus one per cent. Digitalis was again started. Over the course of the next two days he seemed to be definitely improving. On August 31, 1941, he was given one grain of thyroid extract. That evening, about twelve hours after the administration of the thyroid, he suddenly expired.

Clinical Diagnosis.—Rheumatic heart disease, myxedema, and myocardial insufficiency.

Autopsy Findings.—Dr. David Fingerman: The body was that of a well developed and markedly obese man weighing about 210 pounds. There was no edema or cyanosis at the time of death. The skin everywhere had a yellowish discoloration. No special external marks were noted. The liver edge extended three centimeters below the costal margin; the capsule was tense and the cut surface showed extreme changes of chronic passive congestion. The left pleural cavity contained about a liter and a half of clear fluid. The right pleural cavity was negative. A fibrous pericarditis was present which obliterated the pericardial sac but the pericardium was not adherent to the surrounding structures.

The heart was greatly enlarged weighing 610 grams. Its transverse diameter was 17 cm. while that of the chest was 29 cm. There was rather marked hypertrophy of the musculature of both ventricles, particularly of the left, which measured over 2 cm. in thickness. The commissures of the aortic valve were fused. The valve leaflets were stiffened and contained calcarious nodules which encroached upon the orifice so that the total lumen was about the size of a lead pencil. The mitral valve leaflets were thickened and the orifice of the mitral valve measured only 7 cm. in circumference. The chorda tendinæ were thickened and shortened so that the valve was also incompetent. The root of the aorta showed a most extreme atherosclerosis. The coronary arteries showed a patchy arteriosclerosis which so encroached upon the lumina that in numerous places in both branches of the left and right coronary artery, only pin-point openings remained. No thrombi, however, were seen. The descending aorta also showed severe atheromatous changes.

The lungs were greatly increased in weight and showed congestion and edema. The remainder of the thoracic and abdominal organs showed no noteworthy changes.

The thyroid gland was greatly reduced in size, only a thing, fibrous, leaf-like remnant remaining. A few small islands of thyroid parenchyma could be seen in the fibrous connective tissue.

Anatomic Diagnosis.—Rheumatic heart disease, aortic stenosis and regurgitation, mitral stenosis and regurgitation, myxedema, coronary sclerosis, and myocardial insufficiency.

Discussion

Dr. Frank Andrus: I believe that this case illustrates the effect of the reduction of minute volume caused by myxedema in valvular heart disease. Here is a patient who had long outlived his life expectancy considering the severe aortic and mitral stenosis that he had. I think there is no question but what the myxedema and the increase of the circulation time was effective in prolonging his life. It seems that the effect of the administration of the thyroid and the lowering of the circulation time to normal in a heart hampered not only by the valvular deformities, but by the extreme coronary sclerosis was to make the heart unable to keep up. Thus the patient again developed anasarca and the attacks of syncopy.

Examination of the thyroid revealed a primary atro-

phy of the gland, the type we most commonly see in primary myxedema.

Although the aortic valve in these cases contains a great deal of calcium and is very sclerotic, we believe that it was caused by the rheumatic fever rather than by arteriosclerosis. The mitral stenosis and regurgitation, of course, is clearly rheumatic in origin and it is reasonable to assume that both valves were involved during the patient's bouts with rheumatic fever. This is the type of rheumatic aortic valvulitis we see in older individuals, particularly in old men.

DR. BELL: How much desiccated thyroid does a patient having myxedema require?

DR. FAHR: It takes about one grain to raise the basal metabolic rate ten points. In a case such as we are considering it is unwise to bring the metabolic rate up to the normal because of his cardiac lesions. You want to keep the basal rate up only far enough to get rid of the symptoms of myxedema and at the same time keep the work of the heart as light as possible. This is the basis of the treatment of heart disease with total thyroidectomy. The work of the heart is reduced fifteen or even twenty-five per cent. This patient's symptoms, when he was admitted, were more of myocardial insufficiency than thyroid. However, the man's skin had the appearance one sees in myxedema consistent with the high cholesterin levels, his voice was typical, and he had the chair changes. However, he did not complain of myxedema but only of his heart.

DR. MORTENSBAK: I have reviewed some of the recent reports regarding later results in the treatment of heart failure or intractable agina by total ablation of the thyroid. On the average the basal metabolic rate is kept at a level of minus 16 per cent. The circulation rate increases from twenty seconds to thirty-two seconds, and the blood cholesterol goes up to about twice normal. There is no significant change in the size of the heart, the blood pressure, or the vital capacity. Berlin reports twenty-three of 109 patients alive after six years, and Cutler had sixteen of fifty-seven patients alive after five years. Their studies indicate that the response is somewhat better in patients who are being treated for status anginosis. Of the total 166 patients operated upon, seventy-one showed marked improvement, thirty-nine moderate improvement, and the remainder obtained slight or no benefit.

DR. BELL: Do all of the patients require thyroid after the operation?

DR. ANDRUS: They do not seem to require it for some period of time. One of the patients developed clinical myxedema in as short a period as forty-eight days.

DR. FAHR: A lot depends upon the surgeon getting all of the thyroid gland out. If this is not done the patient may not develop myxedema.

DR. PEPPARD: I have observed a woman now sixty-three years old since 1919. There is nothing particularly interesting in the early part of her story. She had her menopause in her late forties. In 1932 her blood pressure was slightly elevated. She had never had any difficulty with her heart. Extra-systoles were observed on occasion. In 1936 she complained of fatigue, dryness and itching of her skin, and of being very forgetful, and while she denied being dizzy, she had frequent spells of unsteadiness. Her B. M. R. was minus 28 per cent. There was no evidence or symptoms of congestive failure. I gave her thyroid extract over a period of about three weeks. She stated that she felt better, stronger, and improved in every way. After about three weeks of treatment her B. M. R. was minus one per cent. The dose of thyroid was diminished, and the rate was held at that level. About two weeks later she presented herself with complaints of palpitation, breathlessness, and swelling of the ankles. We immediately stopped administering the thyroid and gave her digitalis. Subsequently, the edema lessened and disappeared. She got along nicely until after a laparotomy for intestinal obstruction was done due to volvulus the following year when she developed the symptoms and electrocardiographic findings of coronary thrombosis. We have administered enough thyroid to keep her basal metabolic rate at minus 15 per cent. It seems that with this patient also the myxedema was protecting her and when we took away her protection, she developed congestive heart failure. I have had some experience with treatment of heart disease by total thyroidectomy. From the reports available, the operative mortality is about 10 per cent higher in the congestive series. Really good results were obtained in approximately one-third of the cases. In the angina group the operative mortality was 4 per cent and excellent results were seen in 55 per cent. Most of the cases were operated in 1933 and 1934. The treatment was taken up with considerable enthusiasm which has since waned.

DR. BELL: Does anyone do the operation now?

DR. FAHR: We do, in selected cases. We have never had an operative death. In one patient, though he had had continual angina pectoris, he obtained relief for six years. Now his angina is coming back. We have another patient, a truck driver, who was bedridden for a long time because of decompensation due to aortic regurgitation. After his thyroidectomy he became compensated and has been back on his job for six years. It is of utmost importance to maintain the metabolic rate at the proper level after the operation.

CARCINOMA OF THE STOMACH WITH PARTICULAR REFERENCE TO DIAGNOSIS AND RESULTS

The only hope for cure of gastric cancer resides in recognition of the disease at a sufficiently early stage to permit its surgical removal. The means whereby this disease can be recognized, at this stage, when the opportunity is presented, are within the means of us all, namely, a carefully taken history, a clear appreciation of the symptoms which may be produced by early cancer in the stomach, and insistence on competent roentgenologic diagnosis of the stomach in any case in which gastric cancer is even faintly suspected. In addition, an accurate differential diagnosis of any gastric lesion which either may be or might become carcinomatous is essential. The benefit of exploratory laparotomy should be given to any patient who has gastric cancer, when there is even a small chance that the lesion might be removed, unless obvious metastasis already is present. Approximately one-third of the patients who have gastric resection performed for carcinoma of the stomach and survive the operation will live for five or more years following removal of the growth. Although the ultimate prognosis of gastric carcinoma is not bright, by increasing effort and diligence on the part of the medical profession it is hoped that end results gradually may be improved.—JAMES T. PRIESTLEY, M.D., Rochester, Minn. [Jour. M.S.M.S., 40:867, (November) 1941].

CASE REPORT

SALMONELLA PANAMA INFECTION

Report of a Case in Minnesota

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The occurrence of *Salmonella panama* in Minnesota extends the reported geographical incidence of this organism. It was first isolated by E. O. Jordan during a study of an outbreak of food poisoning among American soldiers in Panama. Kauffmann[4] identified it serologically as a new species. Schiff[5,6] and Bornstein[1] reported fifteen isolations from sixteen cases in the New York City area. Of these, seven cases were described as to clinical history and outcome. Five were infants and one was an eleven-year-old boy suffering from osteomyelitis from whose blood the organism was isolated. The remaining case was that of an adult with a "granulomatous lesion of the intestine. It cannot be decided whether the infection caused any symptoms in this patient." Hormaeche[3] isolated the species from an infant in Uruguay. These are the only published reports, although Edwards[2] has identified a number of as yet unpublished isolations. The present case is of interest because it is the first described in this part of the country and because it is the first reported fatal case in an adult.

The patient, a seventy-four-year-old woman, was admitted to the hospital in a comatose condition. As far as could be determined, she had never been ill until the present, although she had complained of back pain during the past year. One week prior to admission, the patient developed abdominal pain which was accompanied by a profuse diarrhea. The diarrhea and abdominal pain lasted for four days, during which time the patient was ambulatory and considered herself quite well. At this point she began to complain of back pain, and before entering the hospital became stuporous, developing labored respiration, The family doctor stated that for two days prior to admission, she had a marked oliguria despite adequate parenteral administration of fluids.

At the time of admission the temperature was 98.6° The pulse was full and slow. Examination of the abdomen was negative. The leukocyte count was 33,300 with 92 per cent polymorphonuclear cells. Blood urea nitrogen was 102 mgm. per cent, the carbon dioxide combining power was 13.6 vols. per cent, and the blood sugar was 176 mgm. per cent. After cystoscopy, a diagnosis of prerenal uremia and acidosis, secondary to the diarrhea, was made.

Blood, urine, and stool cultures on the day of admission yielded, in each case, a Gram-negative rod which gave atypical agglutination with the paratyphoid B antiserum, and which gave biochemical reactions characteristic of the genus Salmonella. This organism was later identified by Dr. P. R. Edwards of the University of Kentucky, by means of the Kauffmann technique, as *Salmonella panama.*

The patient grew progressively worse, the temperature rising to 104° on the day following admission. At this time x-ray examination revealed evidence of a bronchopneumonia. The patient expired twenty-four hours after entering the hospital.

Autopsy revealed a bronchopneumonia, and bilateral small granular kidneys, weighing 50 and 75 grams. No lesions were present in either the small or the large intestine. The final diagnosis was Salmonella infection complicated by a chronic pyelonephritis. The immediate cause of death was uremia.

The Division of Preventable Diseases of the Minnesota State Board of Health, in checking the epidemiology of the case, isolated the same organism from stool cultures of the patient's husband. However, he gave no history of gastro-intestinal disturbance.

More frequent identification of unusual species of Salmonella in man will undoubtedly follow the wider recognition and use of the Salmonella centers set up in various parts of the country for the identification of members of this genus. The correct identification of such strains is essential for a better understanding of the epidemiology and clinical course of Salmonella infections.

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HOMEOPATHIC AND ECLECTIC MEDICINE IN MINNESOTA*

By James Eckman

Rochester, Minnesota

(Continued from October issue)

Certain Homeopathic and Eclectic Pioneers

Dr. James Grant Gilchrist (1842-1906) was born on April 28, 1842, in New York City.[117] It has been said that he settled in Winona in about 1860,[118] but W. K. Kratz,[117] assistant registrar of the Hahnemann Medical College of Philadelphia, reported that Gilchrist was not graduated from the Hahnemann Medical College until 1863. If he was in Winona in 1860, he did not at that time have the degree of Doctor of Medicine. In 1866 Dr. Gilchrist had an office in Winona on Third Street,[118] and in 1871 he became a member of the Minnesota State Homœopathic Institute. He also had an important part in the foundation of the Southern Minnesota Homœopathic Medical Society at Owatonna in October, 1871, and he became that society's first secretary and treasurer.[6] It was said that Dr. Gilchrist was the first homeopathic physician to settle in Owatonna,[6] to which city he removed from Winona. He went to Detroit, Michigan, in 1872. At his death on March 22, 1906, at Iowa City, Dr. Gilchrist was professor of surgery in the old State University of Iowa College of Homœopathic Medicine,[119] which was abolished in 1919.

At Owatonna Dr. Gilchrist was succeeded in February of 1872 by **Dr. Daniel H. Roberts**[6] (1824-1910), an influential Southern Minnesota practitioner who was elected second vice president of the Minnesota State Homœopathic Institute in 1875, first vice president in 1876, and president in 1877. He will be considered later.

It has been shown that **Dr. Oscar Trenkler** (1829-1892) settled in Winona in July of 1861, and that he operated "O. Trenkler and Company" with Dr. A. Putsch over the bank of Orrin Smith and Company in Winona.[120] On December 18, 1862, according to the Adjutant-General's Office of the War Department,[121] Dr. Trenkler entered the United States Army as assistant surgeon to the Fifteenth Wisconsin Infantry Regiment. He was honorably discharged from the army on June 1, 1863, by reason of acceptance of his resignation.[121] In his letter of resignation to the War Department he stated that he desired to settle certain business matters in Germany, his homeland, and that his mother, who was living in that country, wished to see him.[121] It would appear that Dr. Trenkler thereupon went to Germany, for he did not return to Winona until August of 1866.[120]

In 1872, according to Neill,[122] Dr. Trenkler moved to Mankato. He was licensed to practice medicine in Minnesota on December 28, 1883.[83] While

he was in Minnesota he was a member of the Minnesota State Homœopathic Institute. In March of 1888 the *Minnesota Medical Monthly*[123] announced that Dr. Trenkler had decided to go to Carthage, Missouri, and the Division of Medical Licensure of the Missouri State Board of Health has reported that Dr. Trenkler was licensed to practice medicine in that state on August 10, 1888.[124] He received License No. 3604. At the time of his licensure he said that he had been graduated from Ludwigs-Universität Medizinische Fakultät of Giessen, in Hesse, Germany, on February 4, 1854. Mr. C. B. Taylor,[125] of the office of the clerk of Jasper County, Missouri, advised that the Knell Mortuary of Carthage, Missouri, told him that Dr. Trenkler had left Carthage to return to Germany at an uncertain date, but this information would appear to be incorrect, because Mr. P. M. Hamer,[126] chief of the Division of Reference of the National Archives in Washington, D. C., reported that Dr. Trenkler died in Carthage on September 16, 1892, and that his death was attested to by Dr. Frank W. Flower (1838-1915) of Carthage, in an affidavit made to the Pension Bureau on September 21, 1892.

Dr. Paul G. Denninger (1848-1927) was born in Berlin, Germany, on January 20, 1848. In 1862 he came to the United States with his parents, and in 1871 he settled in Minnesota, presumably at Eyota, although in 1881 he was in Faribault. He was elected to membership in the Southern Minnesota Homœopathic Medical Society in October, 1871,[6] but did not receive the degree of Doctor of Medicine until 1879, when he was graduated from the Hahnemann Medical College and Hospital of Chicago. Dr. Denninger was licensed to practice medicine in Minnesota on April 22, 1884.[83] He became a member of the Minnesota State Homœopathic Institute and for some years practiced in Faribault. In about 1890 he removed to California. He practiced in various California towns, and died in San Jose on December 10, 1927.

The name of **Dr. Edmund Beckwith** (1836-1915) is one which evokes much speculation. He was born at Nelson, Ohio, on October 14, 1836, and was graduated from the old Homœopathic Hospital College of Cleveland in 1865. He came to Minnesota a short while thereafter. He became a member of the Southern Minnesota Homœopathic Medical Society at its foundation in Owatonna in 1871, and at that time was living in Rochester.[6] He was never licensed to practice in Minnesota.[83] Dr. Beckwith went to California, probably before 1883, and lived there for most of his life. When he died on September 21, 1915, at Petaluma, California, he was referred to as a pioneer practitioner of the town.[127] It will be noticed that Dr. Beckwith was graduated from a homeopathic institution in Cleveland, and therein arises the speculation previously mentioned. Dr. Seth R. Beckwith (1832-1905), a native Ohioan, was professor of surgery in Edmund Beckwith's college before 1870, was one of the founders of the Pulte Medical College of Cincinnati,[10] and was said to have been the personal physician of James A. Garfield.[128] He died on January 20, 1905.[128] Dr. David H. Beckwith (1825-1909) was professor of sanitary science in Edmund Beckwith's college,[9] president of the Cleveland and Ohio boards of health, and vice president of the Cleveland Medical Library Association.[129] He died in Cleveland on November 19, 1909.[129] If Seth and David Beckwith were related to Edmund Beckwith, as seems likely, the Minnesota pioneer would appear to have come from distinguished background in homeopathic circles in Ohio.

Eden Prairie, Excelsior and Shakopee were the locations, in the order named, of **D. S. French** (1812-1867), who never obtained the degree of Doctor of Medicine.[91] He settled in Eden Prairie in 1855, went to Excelsior a few years later, and in 1861 removed to Shakopee. One of the founders of the Minnesota State Homœopathic Institute in 1867, French died in that year before he could complete his course of lectures at the Hahnemann Medical College of Chicago.[91]

At Winona **Dr. Henry N. Avery** established himself in homeopathic practice in July, 1873, thirteen years after Dr. J. G. Gilchrist had located there. He came from New York City, where he had been professor of physiology and clinical lecturer in diseases of the throat and lungs in the Homœopathic Medical College of New York City.[130] He was a member of the New York State Board of Medical Censors at the time he ventured to Minnesota, and was said to have brought with him the recommendation of Theodore W. Dwight (1822-1892), professor of municipal law at Columbia University and later head of the law school at that university, and Roscoe Conkling (1829-1888), United States Senator from New York.[130] Dr. Avery went to Galesburg, Illinois, in 1877, and settled in Minneapolis in 1882.[130] He became health commissioner of the city of Minneapolis in 1895, and occupied that office until his sudden death at Forman, North Dakota, in 1898.[76]

Dr. Chester Goss Higbee (1835-1908) was born in Pike, New York, in 1835, and at an undetermined date moved to the state of Wisconsin. He volunteered for military service during the War of the Rebellion, enlisting as a private in the Twelfth Wisconsin Infantry Regiment, and emerging with the rank of captain of volunteers. He is known to have been living in Red Wing in February of 1867, but was not at that time a Doctor of Medicine.[77] He read medicine with Dr. T. J. Patchen of Fond du Lac, Wisconsin, and in 1870 was graduated from the Hahnemann Medical College and Hospital of Chicago. Dr. Higbee came at once to Red Wing, where he practiced until 1873 or 1874, at which time he settled in Saint Paul. He was active in organizing the Ramsey County Homœopathic Medical Society, and was a member of that body's first board of censors.[32] In 1878 he was elected to the presidency of the Minnesota State Homœopathic Institute, and in 1890 he became vice president of the American Institute of Homœopathy. He died in Saint Paul on April 3, 1908.[131]

Dr. Jacob M. Saunders (1816-1904) was born in New York on April 11, 1816, the son of August Saunders.[107] He came to Minnesota in 1870 from Madison County, New York, and he was graduated from the Hahnemann Medical College and Hospital in 1871. He became a charter member of the Southern Minnesota Homœopathic Medical Society in the same year.[6] At that time he was living in Dodge Center, and there is reason to believe that he remained in or near Dodge Center for most of his life, although in 1884 he was at Mantorville. He was licensed to practice medicine in Minnesota on December 28, 1883.[107] Dr. Saunders died of paralysis in Ashland Township, Dodge County, on January 14, 1904. He was buried in Milton, Rock County, Wisconsin. He became a member of the Minnesota State Homœopathic Institute in 1871, and was elected second vice president of that body in 1877 and first vice president in 1879.

In Marshall **Dr. Stewart V. Groesbeck** (1841-1908) entered into practice in about 1872. He was born in Otselic in Chenango County, New York, on September 23, 1841, and at the age of seven years journeyed to Wisconsin with his parents.[132] He studied medicine for a while before he enlisted in Company F of the Eighth Wisconsin Infantry regiment on September 23, 1861, for service in the War of the Rebellion. Wounded twice in that war, he was discharged from the Army in November of 1864, and returned to Wisconsin. It is not known that Dr. Groesbeck was a graduate of a medical college. He was a member of the old Minnesota State Eclectic Medical Society, founded on May 26, 1869, at Owatonna,[48] and he may have been a member of the Southern Minnesota Eclectic Medical Society, established on November 14, 1869. Neill[132] said that Dr. Groesbeck was issued a license to practice medicine in Minnesota in 1871, a statement which may mean that he was affected by the Medical Practice Act which became law on March 4, 1869, and was repealed at a later session.[3] In Marshall Dr. Groesbeck was a citizen of some importance. When in November, 1874, Delta Lodge No. 119 of the Masons was organized at Marshall, he was elected junior warden, and he served as postmaster of Marshall, president of the Marshall Board of Health, and register of deeds and coroner of Lyon County. Records[63] indicate that in 1887 he was living in Watertown, Codington County, Territory of Dakota. On June 11, 1887, he underwent an examination for a license to practice medicine in Dakota Territory, and on June 23, 1887, the license was issued to him.[63] By 1906 he was living in Spearfish, South Dakota. He became surgeon to the National Home for Disabled Volunteer Soldiers at Hot Springs, South Dakota, and died in that institution on December 31, 1908.[133] At his death he was a member of the American Medical Association.[133]

Dr. Theodore L. Hatch (1848-1913) of Owatonna was an eclectic physician who made the change to orthodox practice gracefully and without difficulty. He was born in Broome County, New York, on January 20, 1848, and was educated at a common school. At the age of about twenty years he began to teach school, studying medicine meanwhile at Neillsville, Wisconsin, under a preceptor. He was graduated in medicine from the University of Michigan on March 29, 1871, and in October of that year came to Steele County in Minnesota, where he settled first at Blooming Prairie and later at Owatonna.[134] He was secretary of the old Minnesota State Eclectic Medical Society in 1881, and was re-elected to that post at the meeting of the society in Minneapolis on May 24, 1882.[135] In 1881 he wrote that the society had twenty members, and remarked that "When we realize that in our state Eclecticism has barely a foothold, while our school is fully represented in our adjacent sister states, it cannot be considered a favorable reflection upon the Eclectic Medical fraternity of Minnesota, and should be a stimulus to each of us to make a greater effort for the advancement of our system of Medicine."[136]

Nevertheless, Dr. Hatch became a member of the Steele County Medical Society, the Southern Minnesota Medical Association, of which he was once president,[134] the Minnesota State Medical Association and the American Medical Association. He also served as president of the Owatonna board of health. At his death on March 12, 1913, it was written: "Dr. Hatch would have carved for himself a niche in the history of medicine in the state of Minnesota, but poor health had worked against him so much that he gladly welcomed the end."[134]

Dr. Alvinza B. Cole (1848-1924) was born in Canton, New York, on December 28, 1848. In 1878 he was graduated from the old New York Homœopathic Medical College, and shortly after that year he came west to Minnesota. Dr. Cole apparently was a physician who combined both medicine and politics with success, for he was twice elected mayor of Fergus Falls, the city in which he settled, and he was elected to the Minnesota State Senate for the terms 1895-1897 and 1903-1905. At his death in Fergus Falls on June 8, 1924, Dr. Cole was a member of the Minnesota State Medical Association, and was said to have been in the thick of another contest for a seat in the Minnesota Legislature.[137]

Dr. Sidney R. Wakefield (1822-1916) was born in Trumbull County, Ohio, on April 18, 1822, and was graduated from the old Willoughby Medical College of Ohio in 1846. In 1866 he came west to Minnesota, where he settled at Monticello. He had previously served as assistant surgeon to the Seventy-first Ohio Infantry Regiment during the War of the Rebellion. Dr. Wakefield was one of the founders of the Minnesota State Homœopathic Institute at Saint Paul in 1867,[6] and after a lifetime of active service in the practice of medicine, he died of "senile debility" at the home of his son in Creswell, Oregon, on December 13, 1916. He was almost ninety-five years old at death.

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*References 1-18 appear in the June issue, page 479; 19-37 in the July issue, page 572; 38-58 in the August issue, page 674; 59-81 in the September issue, page 769; 82-116 in the October issue, page 873.

(To be continued in the December issue.)

President's Letter

IDEAL CONTINUATION STUDY

THE practice of medicine is a progressive science in every sense of the word and the man who is satisfied with himself and his accomplishment soon finds he is lost in the maze of knowledge and learning that has passed around and by him. Then when put to the test he is found wanting and finds himself bogged down in the forgotten learning of the past.

As one goes about our state and adjoining states, one finds that those men who are the most successful in their various communities are those who always find time to attend medical meetings, who are so interested in medicine that they take the time to do postgraduate work and, in every way possible, keep up with the newer things in medicine and surgery.

The public quickly senses this and comes to know that the man who takes advantage of opportunities for more up-to-date learning is the man to be depended upon. They expect their dollar to buy them the best in service as in other commodities.

Medical magazines give us new scientific facts. Medical books give us detailed procedures in medicine and surgery. But attendance on Continuation Center programs give us not only facts and procedures but direct contact with them that no amount of reading can do.

We have at our University of Minnesota throughout the year, Continuation Center programs of interest to both the general practitioner and the specialist alike, such as are not given any other place in this country; where a few days are so filled with knowledge on one particular subject that the physician student is more than well repaid for the time spent there.

It is my hope that these excellent programs may be continued and that more and more of our members will avail themselves of this golden opportunity for postgraduate work, close to home and under ideal surroundings.

B. J. Branton, M.D., *President*

Minnesota State Medical Association.

EDITORIAL

MINNESOTA MEDICINE

OFFICIAL JOURNAL OF THE MINNESOTA STATE MEDICAL ASSOCIATION

Published by the Association under the direction of its Editing and Publishing Committee

Annual Subscription—$3.00 Single Copies—$0.40
Foreign and Canadian Subscriptions—$3.50

Address all communications to Minnesota Medicine, 2642 University Avenue, Saint Paul, or Suite 308, National Bldg., Minneapolis. Telephone: Nestor 2641.

BUSINESS MANAGER
J. R. BRUCE

Volume 24 NOVEMBER, 1941 Number 11

POLIOMYELITIS IN 1941

WE have again experienced an epidemic of poliomyelitis in Minnesota. Fortunately, not a great number of victims were claimed this year by this disease which strikes terror into the minds of both victims and parents, particularly because of the uncertainty of the nature and extent of the sequelæ in any certain case.

Up to and including October 21 some 238 cases had been reported in Minnesota this year with fifteen deaths. Last year there were about 256 cases with twenty-six fatalities. The number of cases reported by months shows the disease to be a summer and early fall affliction. Some fifteen cases were reported in the state from January 1 to July 1 this year. Fourteen additional cases were reported in July, seventy-three in August, ninety-five in September and forty-one in the first three weeks of October. Fortunately, the epidemic recedes each year with the appearance of frost.

This year Saint Paul furnished more than her share, eighty-nine cases having been reported from Saint Paul since July 1, compared with fifty-five from Minneapolis and thirteen from Duluth. The remaining cases occurred in some twenty-nine different counties of the state.

While there is some evidence, as shown by the investigation of Dr. Perkins, which is reported elsewhere in this issue, that poliomyelitis is a contact disease, the fact that it awaits the closing of schools before it appears in epidemic form and recedes in incidence after the opening of schools in the fall, shows that there are factors in the spread of the disease that we do not understand.

NON-DEFENSE EXPENDITURES

THE physician in his education does not major in economics or government. Yet, every physician knows and fears inflation and its sequelæ. He knows his expenditures must be kept within his income and borrowing ability, or bankruptcy will follow. He knows, too, that the same rules apply to the Federal Government, and that too great a national borrowing will be followed by inflation and its consequences.

To meet the national emergency incident to the depression and unemployment following 1929, our government greatly increased its spending and simultaneously its taxation and borrowing. Some of the spending was without doubt necessary and justified by the emergency. Unfortunately, with the emergency passed there was no reduction in spending and we meet this present emergency with a huge national debt. The present emergency necessitates even greater spending, taxation and borrowing. Is there any

need for continuing the expenditures necessitated by unemployment?

On May 15 last, Mr. Benson, president of Harding College, located in Nebraska, a college few in this part of the country ever heard of, appeared before the Ways and Means Committee of the national House of Representatives, and made a clear presentation of the danger threatening through the mounting national debt, of inflation and its two common sequelæ, socialism and dictatorship, and pointed out specifically how federal expense of non-defense nature can be cut two billion dollars a year. So statesmanlike was Mr. Benson's presentation that the committee applauded—an unheard response to the presentation of testimony before a congressional committee. So far as we know, this is about all Mr. Benson accomplished.

The citizens of this free land are engaged in a gigantic national undertaking to provide for the defense of our freedom. The medical profession is doing its share, in large part gratis, and will not be too critical of poor planning in high places in this emergency. As taxpayers and patriotic citizens, however, we protest at the lack of horse sense on the part of our representatives in their failure to eliminate, or at least greatly reduce, these non-defense government expenditures, which were emergency measures during the depression and unemployment, but which are no longer justified.

There is some evidence that public opinion on this vital matter is being aroused. Congress should not wait for public opinion before adopting this much needed economy. These government expenditures should have been reduced long ago synchronously with the initiation of the draft program. Mr. Benson has told Congress how the government can reduce its expenditures two billion dollars a year.

SALUTE TO NORWAY*

One ponders at times the fate of the medical profession in the occupied countries of Europe. Out of the dark agony that seems to envelop France, Belgium, Holland, Norway, Poland, and the rest comes no word, no picture of what is happening to the members of the medical profession or any inkling of how they are meeting the ordeal of their captivity, their sojourn in the house of bondage.

The newspaper *PM* for September 25, 1941, carried a special article by Albert Deutsch† which permits a brief glimpse of the Norwegian medical profession under circumstances of great difficulty. From this we quote:

Several years ago the eminent Norwegian psychiatrist, Dr. Johann Scharfenberg, wrote a scholarly paper on the personality of Adolf Hitler, concluding that the Fuehrer was a madman. Soon after the Nazis occupied Norway, Gestapo agents entered Dr. Scharfenberg's home and asked him point-blank if he still held the same opinion.

"My opinion has changed in one respect," Dr. Scharfenberg replied. "When I wrote my article I believed Hitler was insane. Now I *know* it."

"Don't you realize your remark is highly dangerous?" asked the Gestapo men.

"Of course," he replied. "But I am an old man, you see. My work is about finished. Now you can do what you like with me. It doesn't matter."

The Nazis spluttered that Dr. Scharfenberg would have to report at the local Quisling police station each day.

"Too much trouble," said the grand old man. "Here's my phone number. You can call me daily if you wish."

They threw Dr. Scharfenberg into prison. Every day the good people of Oslo sent many baskets of flowers and food to his cell. It all got too embarrassing for the Quislings, who released the old psychiatrist after six weeks.

PM's staff writer says that he obtained his information by piecing together reports from abroad and from firsthand accounts from recently arrived medical refugees from Norway.

The Dikemark Insane Asylum, near Oslo, is the largest institution of its kind in Norway. Last spring its medical director, Dr. Rolv Gjessing, received a notice from the new Nazi surgeon general, Dr. Ostrem, ordering him to promote a certain orderly to superintendent of male nurses. Dr. Gjessing refused, knowing that the man's only qualification for the job was being a loyal Nazi. After repeated threats failed, the Quisling administration dismissed and imprisoned Dr. Gjessing.

This outrage was followed by one of the most remarkable acts in medical history. The heads of all medical institutions in Oslo signed a manifesto to the Quisling regime declaring their opposition to appointments made on the basis of political allegiance, demanding the immediate release and reinstatement of their colleague, and threatening a strike of the entire medical body of Oslo—more than 2,000 strong—unless their demands were granted.

The Nazis threatened to throw every signer into a concentration camp, but the medical ranks held and in a few weeks Dr. Gjessing was reinstated as director of Dikemark.

The Norwegian medical profession has repeatedly joined with organized labor and other groups in bold protests against Nazi tyranny. One such protest, addressed to the Nazi Reichscommissar, Josef Terboven, denounced the brutality of Storm Troopers and mass imprisonments of Norwegian democrats. It was signed by forty-three organizations, representing all sections of the people, including the Norwegian Medical Association and the national societies of nurses, dentists, and pharmacists.

*From an Editorial in *New York State Journal of Medicine*, 41:2103, (Nov. 1) 1941.

†Norwegian Doctors "Refuse to Swallow Nazi Medicine." Excerpts from the newspaper *PM*, Inc. Reprinted by special permission.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

PREPAYMENT PLANS FOR MEDICAL SERVICE

Prepayment plans for medical service fall into three groups at the present time: (1) policies issued by insurance companies which provide cash payment to cover costs of certain types of surgery or medical treatment; (2) limited panel systems in which a closed group of physicians renders more or less complete medical service on a prepayment basis; (3) county or state medical society plans for medical service on a monthly prepayment basis.

There are marked differences between complete medical service and group hospital service and also between medical service, as such, and cash payments to cover or partially cover the cost of medical service.

Hospital Service Is Tangible

Hospital service on a prepayment basis has had a remarkable growth. It is a coöperative effort on the part of hospitals banded together to bring the services of their institutions to the public on a prepayment plan. Actuarial studies govern the amount of service thus made available and the premium to be paid for it. There have had to be many adjustments and corrections since the inception of the plan; but the problem of insuring against hospital costs is much simpler than the problem of insuring against medical fees because hospital service in general is a tangible service and can be measured in terms of standard costs per day.

In the case of cash payments by insurance companies, amounts are strictly limited and payment is under the surveillance of claim agents. Also there are provisions for cancellations of policies. Of course the policies are set up, as far as possible, on a basis of actuarial experience and studies.

Limited Panel Has Checks

In the system where one doctor, or a group of doctors, enters into a contract with patients to render certain stipulated medical services, there are natural economic balances and checks. The patient knows definitely what he may expect under the contract and the doctor knows, with equal definiteness, the limitations in funds with which he has to work. Such panel systems are limited in number; they are not all embracing as to service and they are usually kept under economic control.

In this résumé, however, we are limiting our discussion to plans put into effect in various parts of the country by units of organized medicine. In these plans, all of the qualified members of the medical society associate themselves coöperatively with free choice of physician for the patient to provide the service.

Two methods have been used. One is a definite indemnity insurance plan in which a limited sum of money covering a limited medical service is given to the patient in exchange for a monthly payment. It is necessary to qualify under the insurance laws for this type of plan. Much more frequently, medical society plans are written only in terms of complete or limited medical service, to be given at the discretion of the physician, at a standard schedule of fees drawn up by the physicians and under complete control of the physicians.

Basis Is Coöperative

In contrast to the cash payment plans of insurance companies and to the standard payment to hospitals, on a cost per diem basis, made through group hospitalization plans, these medical society plans rest for their success upon the coöperative relationship of the doctors—and doctors, as everybody knows, are definitely individualists. The doctor's word in each case is apt to become final under these plans. Committees can be appointed

to check differences of opinion as to need for treatment, or number of visits required or amount of the fee. Experience has shown, however, that these committees do not work out as well as might be expected and that the doctor's word, in any case, is usually accepted.

Experience has also shown that surgical cases are the most easily handled under any prepayment plan because there are definite, natural checks to the service. Patients are not likely to subject themselves willingly to unnecessary surgery and, if surgery is done in the hospital, there are the usual hospital checks upon the physician to guard against unessential or unwise operations. When allowances are made for medical services, the experience has been that, while a fair fee is agreed upon and stipulated in the beginning, only a percentage of that fee is paid as time goes on.

Patient Difficulties

In a few instances, experimentation is going on with prepayment plans to cover medical service while the patient is in the hospital and with certain added restrictions.

Actuarial studies will in time show something definite about risks and costs of furnishing medical services in the hospital, office and home. In the meantime there are some great difficulties to be ironed out. One rests with the patient who runs to the doctor for everything. There is the question, also, of consultations which are easily abused.

In general, the difficulties of instituting and carrying out prepayment plans for complete medical service, with free choice of physician, are fourfold:

1. An Enabling Act is necessary.

2. There is no agreement among doctors as to fees or as to the amount of service to be covered, whether for surgical and medical benefits in the hospital, or for complete service in the home, office and hospital. The problem is different, of course, where a limited panel of doctors offers the service and controls the funds.

3. Restrictions on the patient are difficult. Some patients might make unnecessarily heavy demands on the service.

4. There is no standard among physicians as to the service necessary in any individual case.

Field Must Be Divided

Experience so far seems to indicate that any sound effort to provide medical care on a prepayment basis should first divide the field of possible services into three groups: (1) surgical benefits in the hospital; (2) surgical and medical benefits in the hospital; (3) complete care in the home, office and hospital. It seems to indicate, also, that complete care is relatively expensive and difficult to administer and that the most tangible and most easily administered and controlled type of care is limited to surgery in the hospital.

Experience has shown further, that the plan must be saleable as well as economically sound. This is a rock against which many plans are foundering. It is the lower income groups that these plans are designed chiefly to reach, since people with means need no such help. But, if the premiums are too high, then only the people with means and foresight will purchase the protections. That is exactly what has happened in several carefully observed experiments and neither needy patients nor doctors benefited.

To Reach the Hard-pressed

It should not be forgotten that the real object of all prepaid medical plans is to reach, not the well-to-do, but the hard-pressed or the improvident or under-paid and provide them with essential service at prices they can afford to pay.

THE COUNCIL MEETS

Foundations for significant expansion in three directions were laid by the Council at their first fall meeting in St. Paul.

Beginning in 1941, the Minnesota State Medical Association will launch a unique study of blindness in one county in Minnesota under auspices of its Committee on Ophthalmology.

The association will coöperate with the State Board of Health to set a standard for accreditation in human tuberculosis control, first in the world, for Minnesota.

The Council approved as reasonable a new schedule of allowances for medical care given to rural relief and Social Security clients which was drawn up by the Division of Social Welfare in coöperation with a committee of the Council. This schedule provides an allowance to physicians of approximately 66⅔ per cent of standard fees, and will be advised by the Division for use of all county welfare boards.

This is the first time in all the history of negotiations between the Council and relief or welfare agencies that any such schedule of allowance has earned the official stamp of approval of an official agency of the medical association. It represents a further step in the present well established relationship between physicians and welfare boards and offers a sound basis for care for the needy in Minnesota.

New Program for the Blind

Dr. F. E. Burch, head of the Minnesota Society for the Prevention of Blindness, presented the plan for the survey of blindness in a Minnesota county to be selected. He asked for an appropriation of $500 from state association funds and promised to secure other funds from interested individuals to provide a sufficient amount for the survey. Due to the fact that eye defects are found to be a serious factor in rejection of draftees and that there is no reliable information as to the ages when these defects have their origin or as to how general they are in the population, the present study promises to make a genuine contribution not only to scientific knowledge but to the national defense.

Accreditation for Human Tuberculosis

The plan to accredit Minnesota counties for human tuberculosis control is a logical outcome of the county-wide survey of Meeker County now in progress under auspices of the Committee on Tuberculosis, Chairman J. A. Myers told the Council. It is expected to provide an important stimulus to tuberculosis work everywhere just as the plan of county accreditation for tuberculosis control among cattle did in the early 20's. The standards set by the committee and approved by the Council, subject to conference with the State Board of Health, are as follows: a tuberculosis death rate of 10 per cent or less per 100,000 population; a tuberculosis infection rate of 10 per cent or less among senior high school students. Plans for certifying county rates and awarding certificates have yet to be drawn up, Dr. Myers said.

Legislation

Among new bills introduced in Washington lately are two, at least, which are disquieting to physicians and public health officials. One, introduced by the Railroad Retirement Board, would have the effect of creating a state insurance scheme to take care of all injured employes and would be the cause of doing away with all the surgical departments of the railroads.

The other is the bill, still waiting House action, which would amend section 40 of the United States Employes Compensation Act to include under the term "physician" osteopaths and chiropractors within the scope of their practice as defined by state law. Both were referred by the Council to the Committee on Public Policy.

Visual Standards

The complete report of the Committee on Visual Economics of the American Medical Association will be reprinted at the request of the Council in an early issue of MINNESOTA MEDICINE. Watch for it and save it. This report provides the new and official standards for measuring disability of the eyes with reference to compensation cases.

STILL IN THE DARK

The President's plan for rehabilitation of rejected draftees was couched in general terms; but health and draft board officials who may be expected to put it into effect are still in the dark as to what the administration really expects of them.

According to the statement released to the press, rejectees with correctible defects will be sent to their physicians for remedial treatment and fees will be paid for those who cannot pay for themselves out of government funds.

The rub seems to be that there is no appropriation for payment of such fees. Will the doctors, who are already contributing so much to national defense, be asked to undertake this task, also, without remuneration?

The answer will come out of the huddles soon. In the meantime medical men whose patriotism is surely beyond question will not be blamed for wondering what this latest step may mean to them and to the practice of medicine in the United States.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

J. F. Du Bois, M.D., Secretary

Minneapolis Abortionist Sentenced to Two Years to Life Imprisonment

RE: State of Minnesota vs. David E. Rhoades, also known as David Smith, also known as Bill Wilson, also known as Eugene Brown.

On October 6, 1941, David E. Rhoades, forty years of age, entered a plea of guilty in the District Court of Hennepin County to an indictment charging him with the crime of abortion and three previous felony convictions. Rhoades was sentenced by the Honorable Frank E. Reed, Judge of the District Court, to serve a term at hard labor in the State Prison at Stillwater "according to law." Under this sentence Rhoades will have to serve not less than two years, and not more than life imprisonment. The statutory sentence for abortion is not to exceed four years, but Rhoades was sentenced as a habitual criminal and accordingly received a much more severe sentence.

Following a joint investigation by the Women's Bureau of the Minneapolis Police Department and the Minnesota State Board of Medical Examiners, Rhoades was arrested by the Minneapolis police officers on August 28, 1941. His arrest followed the admission of a twenty-year-old girl to Minneapolis General Hospital for treatment following a criminal abortion. Rhoades was arrested in the office of William L. Sheperdson, a licensed osteopath, at 315 Masonic Temple Bldg., Minneapolis. Sheperdson was also arrested and on September 16, 1941, Rhoades and Sheperdson were indicted, in separate cases, by the grand jury of Hennepin County for the crime of abortion. Rhoades entered a plea of not guilty and his case was set for trial for October 1, 1941, with bail being fixed in the sum of $5,000.00. Rhoades was remanded to the County Jail because of his inability to furnish the bail. On September 22, 1941, Mr. Orell Leen, Rhoades' attorney, filed a petition in the District Court of Hennepin County, alleging that Rhoades was insane and asking the Court to refer the matter to the Probate Court of Hennepin County for an examination into Rhoades' mental condition.

Rhoades' record discloses that on February 14, 1925, he was adjudicated an insane person in the Probate Court of Hennepin County and committed to the State Hospital at Rochester. He was discharged from the Hospital twenty-five days later by order of Dr. Arthur F. Kilbourne, Superintendent. The discharge set forth that Rhoades was not insane. Rhoades' record also discloses that on November 8, 1935, he was adjudged a feeble minded person by the Probate Court of Hennepin County, and again committed to the State Hospital at Rochester. On November 26, 1935, Rhoades was transferred to the State Hospital at St. Peter, from which institution he escaped on September 18, 1939. On August 7, 1920, Rhoades entered a plea of guilty in the District Court of Hennepin County to the crime of grand larceny in the first degree and was sentenced to the State Reformatory at St. Cloud. He served his sentence, and on December 6, 1928, Rhoades again pleaded guilty in the District Court of Hennepin County to a charge of grand larceny in the second degree. He was sentenced to the State Prison at Stillwater and served his sentence. On January 7, 1935, Rhoades pleaded guilty in the District Court of Scott County to a third charge of grand larceny. On this occasion he was sentenced to serve one year at the State Prison at Stillwater. In the instant case Judge Reed made an order referring the matter to the Probate Court for a sanity examination which was held on October 1, 1941. The Examining Board consisted of the Honorable Manley L. Fosseen, Judge of the Probate Court, N. J. Berkwitz, M.D. and Martin Aune, M.D. Rhoades admitted that he knew the difference between right and wrong and that he was committing a crime when he performed criminal abortions. The Examining Board found him sane, the Board stating: "This individual knows the difference between right and wrong, but appears to be willing to take the easiest way, according to his own admission." The matter was then referred back to the District Court where he entered a plea of guilty on October 6, 1941, and was sentenced as detailed above.

Rhoades, who admitted that he has no medical training of any kind, stated that he became acquainted with the defendant Sheperdson while both were serving sentences in the Minneapolis Workhouse, Sheperdson for contempt of Court for failure to pay alimony and Rhoades for vagrancy. Rhoades also stated that he and Sheperdson were associated together in about fifteen criminal abortions. Sheperdson has entered a plea of guilty, but as of this date has not been sentenced, his case being under investigation by the Probation Officer of Hennepin County.

This case, as will be noted, has many unusual features and was one of the most difficult ones to dispose of. Notwithstanding the fact that Rhoades is only forty years of age, he has served approximately fourteen years in state penal institutions, and another four years in state hospitals for the insane. The Minnesota State Board of Medical Examiners wishes to particularly direct attention to the high type of coöperation received in the case from the Minneapolis Police Department, and particularly the Women's Bureau and the Detective Bureau. A large amount of time was also devoted to this case by Mr. Ed J. Goff, County Attorney, and two of his assistants, Mr. Peter S. Neilson and Mr. Allen Rorem. Legal counsel for the defendant asked the Court to limit the defendant's sentence, but Judge Reed stated that, in his opinion, the defendant was a habitual criminal and was better off in a state penal institution. Under the sentence imposed, Rhoades cannot be released except by order of the State Board of Pardons or the State Board of Parole.

* * *

Two Duluth Women Sentenced to Fifteen Months Each at Shakopee Reformatory

Re: State of Minnesota vs. Minnie Hanson.
Re: State of Minnesota vs. Laura McLean.

On October 8, 1941, Minnie Hanson, forty-five years of age, and Laura McLean, fifty-eight years of age, were sentenced by the Honorable Mark Nolan, Judge of the District Court at Duluth, to a term of fifteen months each in the Women's Reformatory at Shakopee. The defendants were jointly charged with the crime of abortion in an information filed against them on September 25, 1941, by Thomas J. Naylor, County Attorney of St. Louis County. The defendants were arrested on September 19, 1941, following the admission to a Duluth Hospital of a young girl who was suffering from the effects of a criminal abortion. The girl made a statement involving both defendants, and they

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INDUSTRIAL HEALTH

INDUSTRIAL HEALTH—A NEW SERVICE IN THE STATE DEPARTMENT OF HEALTH

Although the existence of occupational diseases has been known for centuries, the systematic control and the desire to prevent them is of fairly recent origin. Soon after the World War, the Division of Industrial Hygiene of the U. S. Public Health Service was formed; professional societies sprang up; state boards of health and labor created industrial health units; and various other governmental and private agencies became interested in the program. Industry was stimulated to join the movement by a growing recognition of its responsibility to protect the health of its workers; through the passage of workmen's compensation acts, and by the realization that among industrial workers, illness, much of which is preventable, causes at least fifteen times as much absenteeism as do industrial injuries. The indirect or hidden costs of industrial absenteeism have been calculated to be four times the costs of compensation and medical care. It has been estimated that the total costs of sickness in industry for the United States is five billion dollars annually.

Broad Viewpoint Needed

In view of the fact that the specific occupational diseases cause only a small fraction of the total disability and lost time of the wage earner due to illness, it becomes obvious that those engaged in industrial health activities must adopt a more broad viewpoint and safeguard the health of the worker against disease from all causes. There is evidence that the morbidity and mortality rates of certain industrial groups are higher than in the general adult population or than in the industrial population as a whole. Studies conducted in a number of industries have shown a high incidence of certain diseases commonly considered as non-occupational; such as tuberculosis, pneumonia, and the degenerative diseases. While it is true that much of the disease among wage earners is due to harmful dusts, vapors, fumes, chemicals, excessive temperatures, and faulty plant sanitation, yet we cannot disregard the effects of improper living conditions, hurry, strain, malnutrition, and communicable diseases. It becomes apparent then that, in order for a state industrial health unit to fill such a broad purpose, it must act as a coördinating unit between other units of the state health department. Thus the industrial health unit finds itself in an especially advantageous position to bring public health to an unusually large and important group of the adult population.

"Most Effective Work"

As Mr. J. J. Bloomfield, of the Division of Industrial Hygiene, U. S. Public Health Service, has pointed out, many of the diseases of childhood are not directly associated with the school environment, yet health departments and physicians have done their most effective work in the prevention of childhood diseases through the medium of the school. The same procedure may be attempted in combating adult disease through the medium of the factory. In other words, there is no reason why the health department cannot carry on a program dealing with venereal disease or tuberculosis control through the industrial groups.

Minnesota, with 210,000 employes in the manufacturing, mechanical, and mineral industries (1930 census), ranks twenty-second among the states according to the number of employes in the above groups. This position is only 32,000 removed from the state occupying fifteenth place. With this position of industrial importance, the State has long recognized the need of an industrial health unit in the Department of Health. It was not until 1939 that the Legislature passed an act specifically authorizing this Department to investigate and make recommendations for the control of occupational disease.

Reporting Required

This act also requires the reporting of occupational diseases by physicians to the State Department of Health. Early in 1940, an Industrial

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In Memoriam

Lemuel M. Roberts

Dr. L. M. Roberts, of Little Falls, died October 9, 1941, after several months of failing health, at the age of seventy-nine.

Dr. Roberts was born in Glendale, Ohio, February 23, 1862. He attended the grade schools of Cincinnati and then spent three years at Urbana University, Urbana, Ohio, before taking a year at the University of Cincinnati. He then attended the Michigan Homeopathic Medical College at Ann Arbor, completing his medical course at the Hahnemann Medical College of Philadelphia in 1883.

Shortly after his graduation, Dr. Roberts was appointed to a position in the government service as physician and surgeon at the Quapaw Indian Agency in Oklahoma. After two years he went to Brainerd, Minnesota, where he practiced for five years.

In 1890 Dr. Roberts went to Little Falls, where he practiced until his retirement. He took postgraduate work in London, Berlin and Vienna in 1894 and twice at later dates in Chicago.

In 1887 Dr. Roberts married Helen Gertrude Cooley of Ohio. Mrs. Roberts died in 1896 and Dr. Roberts married Ida M. Deppman in 1904. She and a son, Clifton Shears Roberts, and seven grandchildren survive.

Dr. Roberts took an active part in medical and fraternal organizations and was a member of the Upper Mississippi Medical Society, the Minnesota State and American Medical Associations. An injury received in an airplane accident in 1936 while escorting a patient to Rochester impaired Dr. Roberts' health, but he continued his active practice until 1938.

INDUSTRIAL HEALTH

(Continued from Page 979)

Hygiene Unit was organized to carry out this activity under the joint supervision of the Division of Sanitation and the Division of Preventable Diseases. In June, 1941, the State Board of Health changed the status of the Industrial Hygiene Unit to that of a Division of Industrial Health.

The general function of the Division of Industrial Health is to offer a technical medical and engineering advisory service to industry for the control of industrial health hazards. A more detailed description of its functions and the services it has to offer will appear in a later article.—L. W. Foker, M.D., Director, Division of Industrial Health, Minnesota Department of Health.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

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were promptly arrested by Duluth police officers. When arraigned in the Duluth Municipal Court, the defendants demanded a preliminary hearing, and the Court set bail in the sum of $2,500.00 each. The defendants were unable to furnish the bail and they were remanded to jail. On September 24, 1941, the defendants were held to the District Court where they each entered a plea of guilty on October 3, 1941, the Court fixing October 8, 1941, as the date for sentencing the defendants.

Both of the defendants have previous police records, Mrs. Hanson having been convicted on January 9, 1924, of disorderly conduct, and being sentenced to twenty-five days. On February 1, 1924, she received a sixty-day sentence for disorderly conduct, and on June 16, 1933, was sentenced to thirty days for petty larceny (shop lifting). Mrs. McLean was fined $100.00 on July 26, 1929, for illegal possession of liquor, and on September 29, 1929, was given sixty days in jail for a similar offense. Mrs. Hanson, at the time of her arrest, resided at 1909 Greysolon Road, Duluth, and Mrs. McLean resided at 1115 East Third Street, Duluth. Judge Nolan refused to suspend the defendants' sentences, and the record of both defendants indicate that they were not entitled to probation.

The very fine results achieved in this case reflect the prompt and efficient work done by the Duluth Police Department, County Attorney Thomas J. Naylor, and his assistant, Walter F. Dacey. Both of the defendants were a menace to the community and neither Mrs. Hanson nor Mrs. McLean have any medical training whatsoever and hold no license to practice any form of healing in the State of Minnesota.

ADEQUATE RELIEF SAVES DOLLARS

One of the biggest bones of contention in the relief problem is the matter of administration—whether it should be under the county system or the township system. About two-thirds of the counties in Minnesota operate under the county system while most of the rest, Swift county included, have the township system and a few handle their relief problem under a compromise arrangement between the two systems.

Proponents of the township system point out that relief costs are less under that form of administration and argue that each governmental unit should have the power to handle its own relief problems.

It is true that Swift county relief costs have been appreciably lowered since the change back to the township system but the lower cost is not entirely due to the change in system. There is no question that relief needs in Swift county as a whole have been considerably less during the last year due to improved conditions.

Also in the matter of adequacy of relief aid given, there is little question that more adequate relief is given under the county system and naturally relief costs would be somewhat higher on that account. But adequate relief now may save many dollars later so that in the long run the county system is cheaper than the township even in that respect.—From the *Swift County Monitor.*

REPORTS and ANNOUNCEMENTS

MEDICAL BROADCAST FOR NOVEMBER

The Minnesota State Medical Association broadcasts weekly at 10:45 o'clock every Saturday morning over Station WCCO, Minneapolis, Station WLB, University of Minnesota, and KDAL, Duluth.

Speaker: William A. O'Brien, M.D., Director of Postgraduate Medical Education, Medical School, University of Minnesota.

November 1—Common Cold.
November 8—Influenza.
November 15—Pneumonia.
November 22—Tuberculosis.
November 29—History of Dentistry.

MINNESOTA MEDICAL FOUNDATION

The second annual meeting of the Minnesota Medical Foundation will be held November 7 at the Coffman Memorial Union on the University of Minnesota campus.

Guest speaker will be Dr. Morris Fishbein, editor of *The Journal of the American Medical Association.* His subject will be "Medicine and the National Emergency."

Officers will report on activities of the Foundation during the past year, future plans will be discussed, and trustees will be elected. Present officers are: Dr. Erling S. Platou, president; Dr. Robert L. Wilder, secretary, and Dr. Jennings C. Litzenberg, treasurer. All are of Minneapolis.

MINNESOTA PATHOLOGICAL SOCIETY

Speakers for the November and December meetings of the Minnesota Pathological Society are announced.

On November 19, Dr. Melvin H. Knisely, assistant professor of anatomy, University of Chicago and University of Tennessee, will speak on "The Effects of Plasmodium Malaria on the Blood Vascular System," and will illustrate his talk with kodachromes. Dr. Knisely has been loaned by the University of Chicago to the University of Tennesse and the Tennessee Valley Authority for the year 1941-42 to continue studies of anti-malaria drugs on the parasites and on the hosts.

Dr. Karl F. Meyer of George Williams Hooper Foundation, University of California Medical Center, San Francisco, will address the Minnesota Pathological Society, December 16, at its meeting in the Amphitheater of the University of Minnesota Anatomy Building. His subject will be "The Animal Kingdom, a Reservoir of Infection."

A symposium on equine encephalomyelitis was conducted at the October 21 meeting of the Minnesota Pathological Society. Dr. Leonard W. Larson of Bismarck, North Dakota, presented clinical features; Dr. Carl M. Eklund of the Minnesota State Board of Health, epidemiology; and Dr. A. B. Baker of the University of Minnesota, pathology. Taking part in the discussion were Dr. Reuel Fenstermacher, University of Minnesota veterinarian, and Dr. Alex Blumstein of Minneapolis.

SOUTHERN MINNESOTA MEDICAL ASSOCIATION

Approximately 100 physicians attended the annual meeting of the Southern Minnesota Medical Association in Mankato, September 29.

Scientific sessions were conducted in the morning and the afternoon, and the meeting was climaxed in the evening with a banquet. Speakers at the banquet included Gideon Seymour, editorial writer for the *Minneapolis Star Journal* and former Associated Press foreign correspondent, whose topic was "Around the World in 2,280 Days"; Dr. B. J. Branton, president of the Minnesota State Medical Association, who discussed the question, "Will Organized Medicine Survive?"; and Dr. W. H. Valentine of Tracy, Association president, who delivered the annual president's message.

Dr. N. W. Barker of Rochester, secretary-treasurer during the past year, was elected president of the Association to succeed Dr. Valentine.

A paper written by Dr. E. H. Juers of Red Wing won the medal awarded annually by the Association for the leading paper presented by a member during the program. Dr. Juers' paper dealt with epiploitis.

The medal for a case history presented on the program went to Dr. P. E. Hermanson of Hendricks, whose report dealt with a case of pregnancy occurring outside the uterus.

The program for the meeting follows:

Morning Session

An Exhibit on Fractures.....Dr. W. C. Stillwell, Mankato
Epiploitis.....Dr. E. H. Juers, Red Wing
Résumé of County Examinations of Draftees.....
Dr. H. B. Troost, Mankato
Idiopathic Auricular Fibrillation: Its Prognosis and Treatment.....Dr. Thomas Dry and Dr. Fred A. Willius, Rochester
Alcoholics Anonymous....Dr. Joseph C. Michael, Minneapolis
Henoch's Purpura.....Dr. C. Koenigsberger, Mankato
Differential Diagnosis and Treatment of Hemorrhagic Diseases.....Dr. C. H. Watkins, Rochester
Studies on the Etiology and Serum Treatment of Encephalitis During the Epidemic in Minnesota and North Dakota in 1941.....Dr. E. C. Rosenow, Rochester
Use of Vitamin B_1 in General Practice.....
Dr. Oliver J. Morehead, Ritzville, Wash.

Afternoon Session

Factors Productive of Disabilities in Ankle Fractures.....
Dr. Harry Macey, Rochester
Toxemias of Pregnancy.....Dr. Fred L. Adair, Chicago
Modern Treatment of Menopause.....
Dr. Samuel H. Geist, New York City
Fistulas between the Urinary Tract and Vagina.....
Drs. J. C. Masson and Robert B. Wilson, Rochester
Modern Treatment of Pneumonia.....
Dr. Harry G. Wood, Rochester

Other case reports were given by Dr. R. F. Hedin, Red Wing, and Dr. W. R. Schmidt, Worthington.

Wives of visiting physicians were entertained during the day by the Blue Earth County Medical Society auxiliary.

WABASHA COUNTY MEDICAL SOCIETY

Dr. Robert A. Glabe of Plainview was elected president of the Wabasha County Medical Society at its seventy-third annual meeting, October 9, in Wabasha. He succeeds Dr. D. G. Mahle of Plainview.

Other officers named are: Dr. T. G. Wellman, Lake City, vice president: Dr. W. F. Wilson, Lake City, secretary-treasurer. Dr. E. C. Bayley of Lake City was named a delegate to the State Association; Dr. B. J. Bouquet of Wabasha, alternate; Dr. W. H. Replogle, Wabasha, censor for three years. Censors holding over are Dr. Mahle, Plainview, and Dr. W. J. Cochrane, Lake City.

Thirty-one persons attended the dinner, at which the Wabasha physicians were hosts. Guests included three officers of the Minnesota State Medical Association: Dr. B. J. Branton, Willmar, president; Dr. H. Z. Griffin, Rochester, president-elect; and Dr. L. A. Buie, Rochester, district councilor.

Tribute was paid Dr. W. J. Cochrane, who recently retired from active practice. He was praised for his many years of service to the community and the medical associations.

A fountain pen and pencil set, on which were engraved his name, was presented to Dr. W. F. Wilson of Lake City in recognition of his entering upon his forty-fifth year as secretary of the county medical society. The presentation was made by Dr. Mahle.

The following scientific program was presented:

President's Address—"Undulant Fever; with Case Reports," Dr. D. G. Mahle, Plainview.
"Enuresis"—Dr. Edward N. Cook, Rochester.
"Ligation in Treatment of Varicose Veins"—Dr. T. G. Wellman, Lake City.
"Carcinoma of the Cervix: Some Observations Regarding Management and Treatment"—Dr. Victor Bruder, radiologist, Winona General Hospital and LaCrosse Lutheran Hospital.

The Woman's Auxiliary of the Wabasha County Medical Society was entertained at the home of Mrs. B. J. Bouquet following the dinner. Plans for the tuberculosis radio essay contest were discussed.

WEST CENTRAL MEDICAL SOCIETY

Dr. F. W. Behmler of Morris was reëlected president of the West Central Medical Society at the annual meeting at Morris, October 8. Dr. Otto Bergan of Clinton was elected vice president, and Dr. Herman Linde of Cyrus, secretary.

Papers were read at the meeting by Dr. H. E. Miller and Dr. Maynard Nelson of Minneapolis.

WOMAN'S AUXILIARY

Mrs. John J. Ryan, *President*
Saint Paul, Minnesota
Mrs. L. R. Boies, *Publicity Chairman*
Knollwood, Hopkins, Minnesota

COUNTY PRESIDENTS and PRESIDENTS-ELECT, 1941-1942

The following women have been elected for offices in their respective counties:

Blue Earth
President—Mrs. E. W. Benham, Mankato
Clay-Becker
President—Mrs. O. O. Larsen, Detroit Lakes
East Central
President—Mrs. A. B. Roehlke, Elk River
Goodhue
President—Mrs. R. V. Sherman, Red Wing
Hennepin
President—Mrs. F. S. McKinney, Minneapolis
President-Elect—Mrs. James N. Johnson, Minneapolis
Lyon-Lincoln
President—Mrs. W. H. Workman, Tracy
Mower
President—Mrs. W. B. Griese, Austin
Nicollet-Le Sueur
President—Mrs. Edmund W. Miller, Saint Peter
Olmsted-Houston-Filmore-Dodge
President—Mrs. Mark Anderson, Rochester
Park Region
President—Mrs. L. C. Comebacker, Fergus Falls
Ramsey
President—Mrs. Mark E. Ryan, Saint Paul
President-Elect—Mrs. George A. Williamson, Saint Paul
Red River Valley
President—Mrs. W. H. Hollands, Fisher
Redwood-Brown
President—Mrs. O. B. Fesenmaier, New Ulm
Renville
President—Mrs. R. E. Erickson, Hector
Rice
President—Mrs. Arthur W. Neutzman, Faribault
St. Louis
President—Mrs. P. S. Rudie, Duluth
President-Elect—Mrs. D. W. Wheeler, Duluth
Scott-Carver
President—Mrs. F. C. Westerman, Montgomery
Southwestern Minnesota
President—Mrs. B. O. Mork, Jr., Worthington
Stearns-Benton
President—Mrs. P. E. Barringer, Saint Cloud
Upper Mississippi
President—Mrs. A. E. Amundson, Little Falls
President-Elect—Mrs. H. W. Lee, Brainerd
Wabasha
President—Mrs. E. W. Ellis, Elgin
Washington
President—Mrs. C. H. Sherman, Stillwater
West Central
President—Mrs. A. F. Geisen, Starbuck
Winona
President—Mrs. H. Heisie, Winona
Wright
President—Mrs. F. E. Ellison, Monticello

STATE SOCIAL COMMITTEE

Mrs. J. M. Neal, Minneapolis
Mrs. Lloyd G. Dack, Saint Paul
Mrs. W. J. Ryan, Duluth
Mrs. George Eusterman, Rochester

STATE CHAIRMEN OF STANDING COMMITTEES

Organization—Mrs. W. W. Moir, Minneapolis
Finance—Mrs. Charles W. Wass, Saint Paul
Legislation—Mrs. John J. Catlin, Buffalo
Public Relations—Mrs. E. C. Eshelby, Saint Paul
Health Education—Mrs. J. A. Thabes, Sr., Brainerd
"Hygeia"—Mrs. J. A. Cosgriff, Olivia
Editor, Press and Publicity—Mrs. L. R. Boies, Hopkins
Printing—Mrs. C. Harry Ghent, Saint Paul
Exhibits—Mrs. W. N. Graves, Duluth
Resolutions—Mrs. C. C. Allen, Austin
Archives—Mrs. Joseph B. Gaida, Saint Cloud
Revisions—Mrs. M. S. Henderson, Rochester
"Bulletin"—Mrs. S. S. Hesselgrave, Saint Paul
Co-Chairman—Mrs. R. N. Jones, Saint Cloud

GOODHUE COUNTY

The first official meeting of Goodhue County took place Tuesday, September 22, at the St. James Hotel, Red Wing, in the form of a luncheon. The members were honored with the presence of the state president, Mrs. John J. Ryan, Saint Paul.

Mrs. R. V. Sherman, Red Wing, presided.

HENNEPIN COUNTY

The opening meeting for the Hennepin County Medical Auxiliary honoring new members and officers was held at the home of Mrs. Russell Morse, Friday, October 3. Mrs. F. H. Schaaf with her committee had charge of the tea.

At the business meeting preceding the program, Mrs. F. S. McKinney presented her committee chairmen:

Social—Mrs. J. F. Curtin, and Mrs. Leonard Lang
Philanthropic—Mrs. F. L. Gilles
Health—Mrs. A. C. Tingdale
Telephone—Mrs. Rolla Stewart
Sarahurst—Mrs. E. W. Bedford
Membership—Mrs. W. K. Haven
Program—Mrs. Wm. Rucker
Printing—Mrs. D. Kirk Pollock
Flowers—Mrs. J. M. Hayes
Finance—Mrs. S. V. Hodge
Hospitality—Mrs. J. M. Hall
State Exhibit—Mrs. Malvin Nydahl
Clipping—Mrs. Theodore Sweetser
Parliamentarian—Mrs. W. J. Byrnes
Editor and Press—Mrs. R. R. Heim
Historian—Mrs. C. E. Willcutt
Archives—Mrs. W. D. Pollard
Legislative and Bulletin—Mrs. James Blake
Public Relations—Mrs. Harlow Hanson
Christmas Seals—Mrs. C. A. Aling
Key—Mrs. L. R. Boies

Other officers for the year include:

President Emeritus—Mrs. W. J. Byrnes
President-Elect—Mrs. James A Johnson
First Vice President—Mrs. J. S. Reynolds
Second Vice President—Mrs. E. J. Huenekens
Treasurer—Mrs. Wm. R. Jones
Recording Secretary—Mrs. John Moe
Auditor—Mrs. Elmer Lundquist
Custodian—Mrs. W. G. Beckman

Mrs. William Rucker then presented Laura Mae Carpenter and Peggy Nichols in "Modern Readings with Musical Backgrounds."

MOWER COUNTY

At the last meeting of the year, Mower County Auxiliary chose the following officers:

President—Mrs. W. B. Grise
Vice President—Mrs. C. L. Sheedy
Secretary—Mrs. Carl Eckhardt
Treasurer—Mrs. J. G. W. Havens

OLMSTED-HOUSTON-FILLMORE-DODGE COUNTIES

Mrs. Mark Anderson, president of Olmsted-Houston-Fillmore-Dodge County Auxiliary, presided at the luncheon for the first fall meeting of the year held at Rochester Country Club, Rochester. Bridge followed.

RICE COUNTY

A tea was held at the home of Dr. and Mrs. E. J. Engberg, Faribault, Minnesota, for the first meeting of the season for Rice County. It was a pleasure to have, as special guest, Mrs. John J. Ryan, Saint Paul. She spoke to the group on the importance of nutrition, which will be emphasized in this year's program.

Officers and committee chairmen for the year include:

President—Mrs. A. W. Neutzman
Secretary-Treasurer—Mrs. E. J. West
Public Relations—Mrs. P. F. Meyer
Hygeia—Mrs. S. W. Stevenson
Bulletin—Mrs. A. M. Hanson
Legislation—Mrs. E. J. Engberg
Publicity—Mrs. Paul H. Weaver

The Auxiliary held its second meeting at the home of Mrs. Paul Meyer, with Miss Caroline Perkins, social service worker at the Minnesota State School and Colony, as speaker.

STEARNS-BENTON COUNTY

Auxiliary members of Stearns-Benton County have been busy this summer. In August, they were hostesses to the wives of doctors attending the Northern Medical Association meeting in Saint Cloud. Prominent in formulating plans and helping with the entertainment were: Mrs. P. E. Barringer, Mrs. Joseph B. Gaida, Mrs. Harry B. Clark, Mrs. William Friesleben, and Mrs. R. N. Jones, Mrs. W. H. Rumpf. Prominent guests were: Mrs. B. J. Branton of Willmar, wife of the president of the State Medical Association, and Mrs. John J. Ryan, St. Paul, State Auxiliary President.

MINNESOTA STATE MEDICAL ASSOCIATION

Eighty-eighth Annual Session

May 25, 26, 27 and 28, 1941

Saint Paul, Minnesota

HOUSE OF DELEGATES

Sunday, May 25, 2:00 P.M.

The first meeting was called to order Sunday, May 25, at 2:00 p.m. by Dr. W. W. Will, Bertha, Speaker.

Following a report from Dr. F. J. Lexa, chairman of the Credentials Committee, that a quorum was present, it was moved, seconded and carried that reading of the minutes of the last meeting be dispensed with and at the request of the Speaker, Dr. H. Z. Giffin, Chairman of the Council, presented the report of the Council.

DR. GIFFIN: The complete report of the Council is in the hands of the Reference Committee but special attention of the delegates might be called to the following points in the report: that the first meeting of the delegates this year is being held in the afternoon instead of the evening to give plenty of time for proper consideration of reports; that the late Dr. C. B. Wright was awarded the distinguished service medal of the Association by the Council, subject to approval of the House of Delegates at this meeting, and the House will be glad to know that he was informed of the preliminary action of the Council while he was still at the hospital in Rochester; that the Committee of the Council to study medical testimony was made a permanent committee to review court cases in which medical testimony appears to the court to have been so contradictory as to indicate that the witness might be consciously deviating from the truth; that Dr. J. M. Hayes has been appointed delegate to the American Medical Association, subject to the approval of this House, to assume the post created by reapportionment of delegates, with Dr. W. W. Will as his alternate; that a committee was appointed to consider the question of dues of members called to active military duty and, on the basis of the report, it was decided to request local societies to assume responsibilities for dues of those unable to pay. It was also decided to maintain an approved pool of physicians who might substitute for men called to service. At yesterday's meeting routine matters, including the very satisfactory financial situation of the Association, were discussed. Also Dr. L. L. Sogge and Mr. F. Manley Brist reported on the year's work with the Legislature and the Council gave them a rising vote of thanks for their splendid record. The following nominations were made subject to approval by this House for delegates and alternates to the American Medical Association:

Delegate—Dr. F. J. Savage	**Alternate—Dr. George Earl**
Delegate—Dr. A. W. Adson	**Alternate—Dr. W. W. Will**
Delegate—Dr. J. M. Hayes	**Alternate—Dr. W. L. Burnap**

Report of the Committee consisting of Drs. E. M. Jones, F. J. Elias and B. S. Adams to re-arrange the bylaws governing organization of committees was accepted by the Council and will be presented to you at the convenience of the Speaker.

It was moved, seconded and carried that the report of the chairman of the Council be accepted.

Chairman Will then called for the report of the Reference Committee on Miscellaneous Scientific Reports, Dr. E. M. Hammes, chairman. The following committee reports were reviewed:

HISTORICAL COMMITTEE

Your Historical Committee has published in MINNESOTA MEDICINE, beginning with January, 1938, and containing to date, the narrative of Medicine in the following counties:

St. Louis	Chisago	Hennepin	Dakota
Washington	Ramsey	Winona	Brown

The following manuscripts have also been published:
Biography of Dr. Thomas S. Williamson—Doctor Hamilton
Diseases of the Dakota Indians—Dr. Thomas S. Williamson

The histories of the following counties, and several manuscripts are at hand, but have not yet been published:
Edward Purcell, the first physician in Minnesota
Biography of Dr. William Sitgreaves Cox
Nicollet County
Asiatic Cholera in St. Paul
Minnesota Valley Medical Society
Mower and Freeborn Counties
Kittson County
Wabasha County
Goodhue County
Medical books of W. W. Mayo
Steele and Le Sueur Counties
Brown County (In publication)
Scott and Carver Counties
Homœopathy in Minnesota

The following minor papers are on hand:
Medical societies and public health
Beginning of the Mayo Clinic
Medical instruction
Medical journalism
Early practice of medicine in Minnesota
Medical men and fur traders
Dakota medicine
The advent of the frontier practitioner
Fairchild—First period of practice of medicine
Walling—Pioneer practice in the Northwest
Hospitalization and Public Health

Other histories and manuscripts have been promised.

All members are urged to see the Minnesota State Medical Association exhibit, "March of Medicine in Minnesota," showing, by selectro-slide, 100 years of medicine since the coming of Christopher Carli, first civilian practitioner in Minnesota, to the Dakotah territory, May 24, 1841.

MONTE C. PIPER, M.D., *Chairman*

COMMITTEE ON MILITARY AFFAIRS

1. *Army.*—Medical Department Reserves for the State as of May 1, are 664, classified as follows:

Active Status		*Extended Active Duty*	*Total*
Medical Reserves	187 plus	220	407
Dental Reserves	99 plus	61	160
Vet. Reserves	43 plus	19	62
Med. Administration	7 plus	8	15
Sanitary Reserves	5 plus	15	20
			664
National Guard		Extended active duty	21

Navy—

Active Status		Extended active duty	Total
Medical Reserves	33	17	50
Dental Reserves	7	3	10

2. *Legislation.*—With the expansion of the army the Medical Reserve Corps is barely adequate in personnel to fill the positions provided for in regulations. The army by July 1, will

require 9,100 Medical Officers of whom between 6,000 and 7,000 will be filled by Reserve Officers.

In order to maintain the quotas for the future, recent legislation has not only made it possible for seniors of qualified Medical Schools to be offered commissions upon completion of satisfactory internship, but, that bona fide students of the Medical Schools giving reasonable promise of becoming acceptable physicians were to be deferred by local boards as long as students progressed satisfactorily. (Authority, Memo 5-3-41 Brig. Gen. Lewis B. Hershey).

3. War Department ruling regarding appointments provide for appointment to the Medical Reserves when placed on extended active duty for one year. Resignation can be obtained by officers below the grade of Captain and giving sufficient cause for such action.

4. The War Department desires that no ineligible Reserve Officer shall be selected for extended active duty except upon specific approval of the department in each individual case. It is assumed that short periods of training will not be offered Reserve Officers of company grade as in previous years due to the army mobilization.

5. *Air Corps.*—Medical Reserves applying for flight examiners are required to spend six weeks of training at an Air Corps Medical Training School. Flight Surgeon is only available to members of the regular army and those of the reserves who served one year on active duty in addition to six weeks' preliminary training.

6. *CCC*—Due to the shortage of Medical Reserves, the camps are being supplied by civilian physicians, contract surgeon basis. Upward of 37 camps will be in operation in Minnesota this year.

Legislation in the last Congress provided for uniform allowance to R.O.T.C. graduates. The bill asking for travel allowance on inactive status still is in the hands of the Military Committee.

7. *Activities.*—The 12th Annual Medico-Military Inactive Status Training Unit was held in Rochester under the auspices of the Mayo Foundation, October 6-20, 1940. The attendance was excellent.

8. Members of the Military Committee were called to assist in selecting specialists to conduct the Induction examinations of the selectees at Fort Snelling. Civilian and Medical Reserve physicians of the Twin Cities and adjacent areas made up the list.

9. The Military Committee was enlarged this year so as to have a representative for each Councilor District.

10. The movement for a new armory at the University of Minnesota should be supported whole-heartedly as under present conditions the physical facilities are inadequate.

11. War Department affiliated units are organized under the direction of the Surgeon General. Two such units are organized in Minnesota, No. 26 at the University of Minnesota and No. 71 at the Mayo Foundation. Civilians receiving brevet commissions in the unit by reason of institutional connection will not be called to any other assignment prior to activation of the unit. Should such a person become detached from the institution by resignation or what not, his commission is automatically cancelled as a member of that unit. A Reserve Officer belonging to such a unit may be detailed to another duty prior to activation of the unit, but is released and returned to the original assignment when the unit becomes active.

12. The problem of satisfactory handling of professional assistance in the communities of the state deprived of physicians who have entered the army is a serious one and after considerable study by the State Medical Association it is believed that the local medical organization aided by the "pool," created by order of the Council, of volunteers for substitute service, can best handle the question of supply to those communities where professional help is needed; also the matter of fee adjustment that might be equitable to both the patient and the physician rendering the service. A specimen contract to cover interests of both physician and substitute was drawn up to aid Reserve Officers who are leaving their practice in the hands of a locum tenens to go on active duty.

COL. F. L. SMITH, *Chairman*

COMMITTEE ON FRACTURES

The Committee on Fractures of the Minnesota State Medical Association held a meeting in Minneapolis on Wednesday, March 12, 1941, jointly with the Minnesota Regional Committee on Fractures of the American College of Surgeons. The committees also attended the afternoon session on Emergency Care and Transportation of Simple and Compound Fractures of the Long Bones of the Extremities, held during the Sectional Meeting of the American College of Surgeons. The committees also observed the demonstrations on the application of First Aid and Transportation Splints presented by medical officers of the United States Army.

The Committee on Fractures of the Minnesota State Medical Association for 1941 consists of at least one member from each of the thirty-three component medical societies, and in nearly every instance this member is chairman of the Committee on Fractures of his county society. Each county in the state is represented. The committee is endeavoring to carry out the recommendations of the Committee on Fractures for the year 1940 as published in MINNESOTA MEDICINE in July, 1940, on pages 511 and 512.

The First Aid and Transportation of Fractures is receiving continued attention and improvement. The Minnesota State Medical Association 16 millimeter movie film on "First Aid and Transportation of Fractures of the Long Bones" and another film on "First Aid and Transportation of Fractures of the Neck and of the Dorsal and Lumbar Spine" are in steadily increasing demand. The films are obtained from Mr. Rosell's office, and there is no charge to members.

In *Life* for January 20, 1941 a Minneapolis intern was shown putting a Thomas splint on a patient with a dislocated patella. In the Rotogravure Section of the *Minneapolis Star Journal* for Sunday, February 2, 1941 the Red Cross Ski Patrol was shown after applying a hinged half ring lower extremity splint to a girl skier with a broken leg. On February 5, 1941, the *Minneapolis Star Journal* showed a Minneapolis intern with a traction splint on a man with a broken leg. The *Minneapolis Morning Tribune* for May 6, 1941, showed two large front-page photographs of patients with the Army type hinged half ring splints on broken legs applied by the attendants of a Minneapolis private ambulance company. This graphic evidence of improvement is in sharp contrast with the picture in the *Minneapolis Journal* of March 10, 1937, when a man with a broken leg is shown being walked into an ambulance assisted by a policeman and a bystander.

With this evidence of the general use and value of the modern traction splints for the upper and lower extremity fractures the Committee on Fractures feels that the time has arrived to recommend the passage of an ordinance in all cities of the state such as was passed in the City of Crookston, Minnesota, through the efforts of the late Dr. Arthur Kahala. The ordinance previously published in MINNESOTA MEDICINE for May, 1937, on page 304, is as follows:

AN ORDINANCE REQUIRING AMBULANCES TO BE EQUIPPED WITH FIRST AID AND SPLINT APPLIANCES TO BE APPROVED BY THE BOARD OF HEALTH AND REQUIRING AN ATTENDANT WITH A CERTIFICATE OF FITNESS.

The City Council of the City of Crookston Do Ordain:

Section 1.—No person, firm or corporation shall operate or cause to be operated any ambulance, public or private, or any other vehicle commonly used for the transportation or conveyance of the sick or injured, without having such vehicle equipped with a set of simple first aid and splint appliances approved by the Board of Health and having in attendance at all times such vehicle is in use a person who has obtained a certificate of fitness as an ambulance attendant from the Board of Health.

Section 2.—Any person desiring a certificate as an ambulance attendant shall make application in writing therefore to the Board of Health. Before the issuance of any such certificate the applicant therefore must present evidence of his qualifications to fill such position and must demonstrate to the satisfaction of the Board of Health his ability to render emergency first aid and to apply approved splints to arm and leg fractures.

Section 3.—Any person violating the provisions of this ordinance shall upon conviction thereof be punished by a fine of not to exceed One Hundred and no/100ths ($100.00) Dollars or by imprisonment for not more than ninety (90) days.

Section 4.—This ordinance shall be in force and effect from and after its passage, approval, publication and record.

This ordinance does not specify any particular special splint. It allows for any improvement which may be made as time goes on and allows the Board of Health of the community to specify the splints to be used. The local members of the State Fracture Committee can work with the Board of Health, and undoubtedly only modern splints and methods will be approved. Such a regulation should serve as a protection to the citizen of each community throughout Minnesota.

It seems generally agreed that the Army type traction splints should be used for simple fractures of the long bones for first aid and transportation. The committee has found some opposition to the use of traction splints for first aid and transportation in compound fractures because contaminated bone will be occasionally brought back into the wound, and we wish to discuss this point.

There is, of course, a difference between contaminated wounds and infected wounds. All compound fractures should be considered as contaminated, and they may become infected. The infection begins in the soft parts, and it is therefore important to protect the soft parts. If one end of the bone is outside the wound, the other end is usually in the wound. The wound is contaminated, and if the splinting is inadequate the end of the bone on the inside is damaging the soft tissues and preparing the contaminated tissue for the later infection.

For practical purposes compound fractures may be divided into three groups. There is the group where a foreign body

penetrates the tissues and produces a fracture. This wound is contaminated, and without adequate splinting the tissues will be further damaged, the contamination will be spread about, and it becomes increasingly difficult to prevent infection.

In a second group which is more common in civil life a fractured bone will penetrate the skin and be immediately drawn back into the wound. This wound is contaminated, and failure to apply traction splints will similarly increase the damage to the soft parts and increase the chance of infection.

In a third group which is usually the smallest group, one end of the fractured bone will be sticking out of the wound and will be dirty. The wound will be contaminated and the other end of the bone will be inside ready to damage the soft parts, if the splinting is inadequate, and spread the contamination. To apply a traction splint will result in bringing the dirty bone back into the already contaminated wound, but the damage to the soft parts will be minimized, and the wound will be in better shape for the surgeon when the patient gets to the operating room. From the standpoint of the greatest good to the greatest number, we believe that the use of the Keller-Blake hinged half ring splints for the lower extremity and the Murray-Jones hinged ring splints for the upper extremity which were introduced in 1916 in World War I and which have been in use for twenty-five years and are now being used in World War II, should be carried on every civilian ambulance and that the ambulance attendants should be able to properly apply these splints.

At this point and in connection with the treatment of compound fractures it might be well to include a resolution which was presented by Dr. William O'Neill Sherman at the January, 1941 meeting of the Committee on Fractures and Other Traumas of the American College of Surgeons and which reads as follows:

> RESOLVED: That it is the consensus of this Committee that the use of snug-fitting plaster encasements in the initial treatment of acute compound fractures is inadvisable except where the case can be closely and continuously observed.
>
> That early splinting, utilizing fixed traction, should be followed by adequate debridement at the earliest possible time; that such debridement should accomplish removal of all dead and devitalized tissue, eliminating all dead spaces and removing all foreign material.
>
> If chemical sterilization is feasible, the use of aqueous sodium hypochlorite is advised.
>
> That the immediate closure of compound fractures is inadvisable.

The committee decided at its meeting held March 12, 1941, that for this year all efforts as a committee should be directed toward educating the public in the use of the Army type First Aid and Transportation Traction Splints. The movie films owned by the Minnesota State Medical Association should first be shown in each county medical society and before hospital staff organizations and other interested medical societies.

The local ambulance organizations, public and private, and undertakers who operate ambulances should be given demonstrations with the moving pictures and with actual splints.

Hospitals should be urged to keep the standardized splints on hand for exchange when splinted patients are brought in on ambulances.

Doctors should be urged to keep standard splints in their offices or automobiles ready for emergency use.

Nurses' organizations, Red Cross groups, Boy Scouts, Girl Scouts, first aid groups and safety groups in industrial organizations should be shown the first aid movies and given demonstrations in the application of the Army type traction splints for first aid and transportation of fractures of the upper and lower extremities.

In a letter to the writer from Sir Ernest W. Hey Groves of England he discussed this problem succinctly as follows: "The attempt to get fracture treatment better organized is meeting with verbal encouragement but great practical opposition; the latter is chiefly of a negative character, the 'vis inertia' which confronts all efforts at reform."

We believe that the fracture committee of the Minnesota State Medical Association is overcoming this "vis inertia" and is making real progress and improvement throughout the State.

ROSCOE E. WEBB, M.D., *Chairman*

COMMITTEE ON INDUSTRIAL HEALTH

This Committee has been feeling its way along attempting to become well informed on the real functions and the work which may be accomplished by it. Dr. L. S. Arling of Minneapolis, Vice Chairman, represented the group at the annual Industrial Health Conference in Chicago. Present indications are that the Committee will be called upon to coördinate certain activities in connection with national defense. So far we lack specific instructions.

Unfortunately, the $10,000 appropriation requested to further the work of Doctor Fokker's division in the Department of Health failed to pass the recent session of the State Legislature. It is our hope that some way will be found to carry on the work. The Committee will help further a careful study concerning occupational diseases during the next two years so that definite recommendations for changes in the State Workman's Compensation Law may be made at the next session of the Legislature if found advisable.

J. LAWRENCE MCLEOD, M.D., *Chairman*

COMMITTEE TO STUDY MOTOR VEHICLE ACCIDENTS

The Committee to Study Motor Vehicle Accidents has continued during the past year to follow closely the developments in tests for alcohol in motorists involved in accidents. Material on the subject has been collected looking to the eventual recommendation of standards of methods to police authorities.

Due to conflicting reports on results of tests used elsewhere, as well as to other pertinent considerations, it seemed unwise to make such recommendations last year and the situation has not greatly changed. The committee will work closely with the Minnesota Safety Council and other interested agencies in the eventual solution of this problem.

J. C. HULTKRANS, M.D., *Chairman*

COMMITTEE TO STUDY PSYCHOPATHIC PERSONALITIES

A meeting was held in conjunction with the Committee appointed by the State Bar Association to Study Psychopathic Personalities, in the office of the Attorney General at the State Capitol on January 16, 1941.

After considerable discussion the following report was drafted and submitted to Governor Stassen.

"Your committee, in accordance with the request of the Legislature, has completed its consideration of the Laws of 1939, Chapter 369, relating to psychopathic personalities.

"As of November, 1940, fifty-three persons had been committed as psychopathic personalities; of this number two have been discharged, six paroled, three escaped, one transferred to the Veterans' Hospital at St. Cloud and forty-one in State Institutions.

"After considerable discussion it was determined by this committee that no changes in the definition as used by Chapter 369 should be made at this time. Though the definition is not altogether satisfactory, it has been determined by both the State Supreme Court and United States Supreme Court to meet constitutional requirements and in view of the courts' interpretation it was felt that any change at this time might merely add confusion to necessarily complicated concepts.

"Your committee respectfully submits the following recommendations:

"1. Section 8992-177 should be amended so as to provide that the two duly licensed doctors of medicine appointed by the court to assist in the examination of the patient should receive a fee for their services in such amount as the appointing judge shall determine. The determination of the existence in a person of a psychopathic personality is a matter of considerable difficulty and which requires skilled assistance by physicians. The records show that a great number of these hearings consume an entire day or longer. Under section 8992-177 the doctor of medicine assisting the examiner may be paid but $5.00. In so far as much of the success of this law will depend upon the caliber of medical assistance furnished to the court, it is our recommendation that the judge determine the amount of fees to be paid the physicians. Such an amendment would permit the adjustment of the fees so as to accord with the amount of time consumed and the difficulty of the issues involved.

"2. Minnesota Statutes pertaining to the commitment of all persons mentally deficient or defective should be revised. Much of the difficulty involved with the administration of commitment laws pertaining to the feebleminded, the epileptic, the insane, and the psychopathic personality appears to be caused by the fact that we are requiring courts to make subtle and difficult medical and psychiatric diagnoses. It is felt that the courts should properly consider merely whether because of mental defect or deficiency any individual is in need of care for his benefit or the benefit of society. Whether or not such persons should be properly classified as feebleminded, psychopathic, or some other form of mental abberation should be properly left to the determination of competent physicians and psychiatrists. In so far as specific recommendations effecting such a change would cut across the entire field of mental defects, it was thought to be without the scope of this committee's function. Consequently, we recommend that an interim committee be appointed to study the entire problem of commitment of persons mentally deficient or defective. This would involve codification of laws pertaining to commitments recommending such changes as are necessary to provide adequate psychiatric service to the courts, and such other changes in the laws pertaining to commitments as might be deemed advisable by the committee."

It was suggested also that an interim committee be appointed to study the question of psychopathic personalties.

GORDON R. KAMMAN, M.D., *Chairman*

INTERPROFESSIONAL RELATIONSHIPS

A meeting was held to consider the problem of supplying nurses to rural hospitals and especially of adjusting standards of nursing education to the rural nursing training schools so as not to deprive rural hospitals and populations of much needed nurses at fees they are able to pay.

Nurses, hospital superintendents and physicians from rural communities met with the committee, discussed nursing standards and the possibility of a law governing activities of the Nurses Examining Board so as to protect the rural hospital. A further meeting was agreed upon in the hope of arriving at a compromise.

R. G. ALLISON, M.D., *Chairman*

DOCTOR HAMMES: The Reference Committee found that every committee had done an excellent job.

More frequent meetings of the Interprofessional Relationship Committee were suggested, especially during the emergency when there is acute danger of shortage of nurses.

The Reference Committee suggests also that an effort be made to obtain an advance subscription list in order to find out how many members may wish to buy the complete history which is now being printed serially by the Historical Committee in MINNESOTA MEDICINE.

The Reference Committee commends the work of the Committee on Military Affairs and members of the House of Delegates are urged to read the excellent report of the Committee on Fractures, and it is suggested that the Editing and Publishing Committee be instructed to publish the recommendations in MINNESOTA MEDICINE. Delegates will also watch results of the work of the Committee on Industrial Health with interest.

Attention to the report of the Committee on Motor Vehicle Accidents is recommended also and the Committee suggests that the report of the Committee on Medical Testimony be taken up at the evening session.

Doctor Will then called on the chairmen of the above committees.

DR. R. G. ALLISON, chairman of the Interprofessional Relationships Committee: My committee plans to meet further during the present meeting and may have a supplementary report to offer at a future session of the Delegates.

Doctor Piper, chairman, Historical Committee, reviewed the report of his committee and expressed his regret that Dr. J. M. Armstrong, through whose efforts most of the material has been assembled, was not present to speak to the Delegates.

DR. F. L. SMITH, chairman of the Committee on Military Affairs: I should like to call your attention, inasmuch as a good many reserves are going into the Air Corps, to the fact that there has been a change in the regulations recently which permits a man to become a Flight Examiner after only a six weeks' course. To become a Flight Surgeon it is still necessary to have a year's extension course followed by six weeks' training at Randolph Field.

DR. GORDON KAMMAN, chairman of the Committee on Psychopathic Personalities: I should like to point out that your committee worked with a committee of the Minnesota State Bar Association on the report presented and that it was submitted and accepted by Governor Stassen. Also that one of the chief difficulties in the whole question of psychopathic personalities is the matter of definition. The question has been raised as to why it was necessary to include in the definition of a psychopathic personality the qualification "dangerous to others." As a matter of fact, we have experienced difficulty in securing the commitment of psychopathic persons not dangerous to others. The trouble is that there was considerable opposition in the judiciary committee of the Senate to the law and it was retained in order to satisfy lawyers and probate judges and extinguish opposition in the Senate where the bill was almost killed. Mr. Kent Vandenburg of the Attorney General's office, who pleaded the cases before the Supreme Court, said that the phrase was not absolutely necessary from a constitutional point of view but felt that it should be continued in the law, in view of the fact that the Michigan law, without it, did not stand up. So far the law has worked well and I am sure the Interim Committee will iron out the few kinks which remain in it, with the Governor's approval.

It was moved, seconded and carried at the recommendation of the Reference Committee that the reports be accepted.

Doctor Will then called for the report of the Reference Committee on Medical Economics, Dr. A. L. Vadheim, chairman.

The following committee reports were reviewed:

COMMITTEE ON MEDICAL ECONOMICS

Attention of the committee as a whole has been directed, principally, to the question of payment for medical expense on some other basis than on that of individual fees for individual service.

Private practice in the old sense continues, of course, and will continue to a greater or less degree. Increasingly, however, medical service is being paid for either out of taxes or by coöperative effort, and public interest appears to be mounting in the budget plan or insurance method of paying for sickness and accident care. People are asking why it should not be possible to insure thus against medical fees when other types of unusual catastrophe such as death, fire and automobile accidents are met by workable insurance plans.

Theoretically, there seems to be no good reason why such plans should not be feasible and, in point of fact, the medical profession has never raised objection to insurance to aid people in paying for medical expenses. Objection has been raised, however, to groups who undertake to serve a community independently of organized medicine.

There is no ethical or theoretical objection to such plans when they are promoted by units of organized medicine and an attempt is made to safeguard fundamental principles of good medical practice. In fact, a considerable number of medical societies and associations are already experimenting with such plans. Difficulties of various sorts have been encountered in the course of these experiments but sufficient time has not yet elapsed to judge of their success or failure.

In connection with these studies attention of the delegates is called to the article on "Insurance for Expense of Medical Service" by Wendell A. Milliman, Associate Actuary of the Equitable Life Assurance Company of the United States, reprinted in full in the April issue of MINNESOTA MEDICINE under auspices of this committee. This article represents the first impartial study ever published by an actuarial expert on this question. Examples of many approaches to the problem are studied in the article, solely on the basis of their actuarial soundness and everybody who is interested, both skeptics and enthusiasts, should read it carefully.

Much valuable work has been done by the sub-committees of the Committee on Medical Economics during the past year, for most of which separate reports are presented. Specific proposals for separate group plans for medical service have been made by the National Youth Administration, and the Farm Security Administration to the Council during the past year and were referred by the Council to the Committee on Low Income and Indigent Problems.

The Committee on Sickness Insurance has had under consideration two separate plans for pre-payment insurance brought to it by units within the state. It is conscientiously fulfilling its function as an advisory body on these problems, actual action being reserved for the county or district medical societies concerned. All sub-committees have worked faithfully and served well in this critical period.

GEORGE EARL, M.D., *Chairman*

COMMITTEE ON SICKNESS INSURANCE

Although a great deal of interest exists concerning prepayment plans for sickness insurance, the Committee was agreed at a recent meeting that the State as a whole is not ready to adopt a State plan. However, the Committee is willing to supply all available information to any group desiring to experiment with sickness insurance.

Dr. Adson reported briefly on the Northwest Conference.

Representatives of the Ramsey County Medical Society were asked to present to the committee the plan for prepaid medical service now under consideration for Ramsey County at the meeting and Dr. V. P. Hauser, on behalf of the representatives from the Ramsey County Medical Society, declared that their plan is patterned after the plan of the Minnesota Hospital Service Association. Because of the success of the hospital service plan, they believe that an organization along similar lines could be worked up whereby insurance could be sold to employed groups, preferably the same groups that now hold hospital service certificates or contracts. While proceeding with the details of the plan, they had found first that they should have an Enabling Act so that they would not be forced to operate under the insurance laws. The Ramsey County Committee was of the opinion that the entire matter should be brought before the State Committee on Sickness Insurance with the idea of attempting to have such a bill introduced in the legislature before the end of the session.

The plan had not been presented to the Ramsey County Medical Society as a whole, Doctor Hauser reported, and they could not say whether the Society was in favor of it or not; but it was the feeling of the local committee that they should be prepared with a plan in case the government forced some scheme upon the doctors.

Doctor Sogge, chairman of the Legislative Committee, pointed out that it was now very late to introduce any legislation into the legislature and inasmuch as the Ramsey County Enabling Act was not in proper form for immediate presentation, he felt that it would be practically impossible to get it passed at that session. Doctor Sogge stated further, however, that if application of the Act was limited to Ramsey County, and did not include the entire state, it would have a much better chance of passing.

It was moved that this matter be presented formally to the Council at its meeting the same evening. Doctors Hauser and Bell were delegated to appear before the Council.

The Ramsey County representatives retired and the Committee then discussed a plan formulated by a Minneapolis group for prepaid service which has recently come to light. Doctor Adson stated that this plan also would be considered at the Council meeting that evening.

Doctor Crewe, a member of the Committee, submitted a proposal also, but it was not considered at this time.

The meeting adjourned.

A. W. Adson, M.D., *Chairman*

SUB-COMMITTEE ON LOW INCOME AND INDIGENT PROBLEMS

The average care of the indigent may be divided this year into four groups:

1. Those who are on direct relief. It seems to this Committee that this problem is being handled very well, especially due to the fact that there have been Contact Committees in each county which are in the main doing their duty.

2. The second problem covers the care of the old age pensioner. By our previous plan the pensioner who received additional funds for medical service was required to bring his doctor's receipt back to the Relief Commission before getting his next check. Unfortunately, during the past month the federal government has ruled it is not imperative and this leads us into a rather serious situation as far as the doctor is concerned. The doctor who does his work at a reduced fee should not be obliged to scramble for his money from these assistance clients. At the present time this matter is under consideration by the State Welfare Division, as well as this committee and the State Society. It is hoped that some federal regulation can be made whereby a certain definite amount per client on old age pension can be set aside and placed in a common fund in each county to take care of all medical expenses. The medical expenses will then be paid in the same manner in which they are paid for the patient on direct relief.

3. During the year we have had considerable discussion with the Farm Security Administration officials and the council of the State Society gave permission to the F.S.A. to go into three counties to contact the doctors in these counties and see if they wished to set up some sort of an insurance plan covering F.S.A. clients. These counties were Itasca, Morrison and Ottertail. The doctors in Itasca County, after much consideration, interviewing the patients getting aid from the Farm Security Administration and also contacts with the officials of the F.S.A., decided to turn the proposition down. In Morrison County and Ottertail County favorable contracts have been set up for a trial period of one year to see how the proposition may work out. (A copy of this contract is on file in the Executive Secretary's office.)

4. A program has now been set whereby through a medical officer, as well as a state representative of the N.Y.A., certain groups of N.Y.A. boys and girls are being given a general examination by doctors selected by County Medical Societies. It is hoped by this plan to find the defects that these boys and girls may have. More specific plans will then be instituted to take care of these very decided defects, especially if they are a bar to occupational employment. So far, at the time of this meeting, only the preliminary examinations are being made, and an effort will be made to coöperate with the N.Y.A. as much as possible, at the same time looking after the interests of the medical society.

W. A. Coventry, M.D., *Chairman*

COMMITTEE ON CONTRACT PRACTICE

Of especial interest to this committee and to all physicians in the state was the decision of the Supreme Court denying the appeal brought by the Fraternal Order of Eagles when their action to restrain the Minnesota State Board of Medical Examiners from interfering in the contract between the lodge and a physician hired to provide medical service to members was dismissed in the lower court.

The Supreme Court of Minnesota thus held again, as many other state courts have also held, that a corporation may not legally engage in the practice of medicine through the medium of employing a licensed physician to render medical services to a third person.

A vigorous attempt to change the law was made by representatives of the Order in the last legislature, but the bill failed to pass in either the House or the Senate.

No other instances of infraction or alleged infraction have been referred to the committee for investigation during the past year, though the Committee has followed closely several instances where attempts are being made by various groups to enter into the practice of medicine.

The entire profession of the state must be more alert than usual as medical standards are under siege from all sides.

F. A. Olson, M.D., *Chairman*

SUB-COMMITTEE ON MEDICAL ETHICS

At its last meeting, the House of Delegates approved the suggestion that the name of this committee be changed, that henceforth it be known as the Sub-committee on Medical Ethics and that the number of its members be reduced to three.

Prior to the last annual meeting a letter was sent to the presidents and secretaries of the county medical societies indicating the desire of this committee to assist in the management of any difficulty pertaining to medical ethics which might exist among its members. In the same communication the societies were requested to furnish the committee with information concerning any ethical problems which they had encountered in the past. It was felt that lessons might be learned from known infringements of the ethical code and that information might be properly published without betrayal of individual or group interests.

At the same time an attempt was made to get similar information from the American Medical Association. The inquiries, however, met with little response and it was not considered advisable to pursue the idea further. At this time, when the efforts of the American Medical Association to maintain ethical standards appear to be seriously obstructed, we believe that our efforts should be renewed. Your committee offers assurance of its desire to assist in stabilizing this vital problem.

During the past eighteen months, a number of problems have come to the attention of the committee and we believe they have been handled satisfactorily. The work of this committee, if properly conducted, may assist in the solution of problems which might develop medico-legal phases if permitted to continue. The methods employed by the committee, it is believed, eliminate publicity and consequent embarrassment.

As usual, a course of lectures has been, and will continue, to be given at the University of Minnesota until the program is complete. The type of lectures given by various speakers is carefully selected. If there are any suggestions concerning alterations or adjustments in this program of lectures, the committee will be glad to have them. For your convenience, the titles and dates of the lectures, as well as the names of the speakers, again are published.

April 4. *Opportunities in and Preparation for Practice:* General practice, specialization; industrial medicine; government service; insurance medicine; teaching and research; graduate and postgraduate training.
Dr. H. S. Diehl

April 18. *The Management of the Public and Private Patient:* Winning the patient's confidence; the diagnosis; the prognosis; coöperation of the patient in carrying out treatment; the patient's family; his job; his bills for medical and hospital care.
Dr. S. M. White

April 25. *The Ethics of the Practice of Medicine:* Responsibility of physicians to their patients and to each other; consultations; fee splitting; relationship to druggists, to nurses, euthenasia.
Dr. F. J. Hirschboeck

May 2. *Starting the Practice of Medicine:* Choosing a location; problem of the young practitioner, relationship to other physicians; to hospitals; getting acquainted; determination of fees. Individual and group practice. Partnerships.
Dr. J. M. Hayes

May 9. *Medical Licensure:* State and National Boards; Basic Science Boards; reciprocity; Narcotic Licenses; responsibility of Licensure; revocation of license to practice medicine.
Dr. A. W. Adson

May 16. *Malpractice:* Definition; justified and unjustified malpractice suits; examples; safeguards against malpractice; malpractice insurance.
Dr. B. J. Branton

May 23. *The Physician in Court:* In industrial compensation cases; as an expert witness in criminal suits; in personal injury suits, in malpractice suits.
Judge Paul Carrol

June 6. *Medical Care of the Indigent and of Low Income Groups:* Cost of medical care; system of individualistic practice; free and pay clinics; state medicine; health insurance; hospital insurance; attitude of organized medical profession; trends in this country.
Dr. R. E. Scammon

June 13. *Quackery, Fads, Cults and Patent Medicines:* Definition and description; reasons for existence; relationship to the practice of medicine and to the public health; attempts at control; borderline types of practice by physicians.
W. A. O'Brien

L. A. Buie, M.D., *Chairman*

EDITING AND PUBLISHING COMMITTEE

The year 1940 was another good year for MINNESOTA MEDICINE, from an advertising revenue as well as editorial standpoint. There was the largest number of copies printed, the largest number of pages, the largest number of illustrations and the largest average per issue of any year. The net surplus was one of the largest ever shown in its twenty-three years of publication, a net cash surplus amounting to $1,524.77 as compared to $1,679.32 for last year.

During 1940 there were printed a total of 39,950 copies of the journal, or an average of 3,329 for each month during the year. The total number of pages amounted to 1,268, including the supplement of fifty-two pages published with the January, 1940, issue. Of this number 952 were devoted to reading and 316 to advertising. The reading pages included 128 scientific articles, not including the fifty-two-page supplement but including those presented in the proceedings of the Minnesota Academy of Medicine and the Minneapolis Surgical Society. In addition there were six abstracts of papers published and eleven case reports. This number does not include the case reports appearing in the body of many of the scientific articles. There were 189 illustrations, an average of almost sixteen illustrations per issue, the largest number of cuts that has appeared in any volume since the journal was established twenty-three years ago.

The special section devoted to Medical History of Minnesota and Medical Economics, occupied 77.5 pages and seventy-one pages, respectively, or an average of six and one-half pages per issue. Other special sections included editorials, reports and announcements of societies, news items, book reviews, the yearly roster and minutes of the annual meeting of the Association. There are now approximately 229 pages of standing type matter relating to the Medical History of Minnesota.

During the early part of 1940 arrangements were made for visiting the medical school of the University each month for news items and activities of the school. This has resulted in the publication of many items concerning the medical school that no doubt have been received with a good deal of interest, and we think that the medical school appreciates the service. Special effort has been made to obtain more news items of a personal nature concerning doctors throughout the state. This has resulted in the publication of the largest number of personal items during 1940 that has ever been published in the Journal. This service has been supplied without charge by the Business Manager's office.

At the close of 1940 our records show a total number of paid membership subscriptions of 2,506, with about 130 subscriptions carried the first part of the year as delinquents. There were 205 non-member subscriptions received during the year. Miscellaneous distribution including single copy sales, exchanges, complimentary copies, advertisers' checking copies, which includes the advertising agencies as well as the advertisers, numbered close to 400 copies each issue, leaving a surplus of about 100 copies for the filling of orders for back copies and for sample copies to prospective subscribers and advertisers.

As in 1940, but perhaps more so, the business outlook is extremely uncertain. If our country remains out of war, the larger expenditures for defense are sure to result in greater purchasing power and a possible increase in advertising revenue. However, there are so many things upon which conditions are contingent that one hesitates to make any forecast. If this country becomes involved in the world war, no one knows what the conditions will be.

As we all know, advertising expenditures are largely contingent upon good business conditions. Ordinarily, when volume is up, advertising budgets generally follow suit. With the additional income taxes which have been imposed and, especially, the surplus earnings taxes, some manufacturers may feel disposed to use a portion of surplus earnings for institutional advertising. In such a situation, larger advertising appropriations may be reasonably expected. But, as previously stated, all these things can be so vitally affected by other conditions, that it is not safe to make any estimate as to what the year will bring.

Again we want to call to the attention of the House of Delegates and the Council, that a very substantial volume of advertising has to be declined each year because the products advertised have not been approved by the Council of the American Medical Association. Frequently this advertising will be noted in other publications. It is of course understood that MINNESOTA MEDICINE can carry no advertising except that of products measuring up to A.M.A. standards both in quality and in methods of marketing.

During the year the Publication Committee lost one of its most loyal and efficient members in the untimely death of Dr. C. B. Wright. Dr. Wright was a member of the committee since 1935, and always took an active part in publication matters. His loss will be a severe one to the committee as well as to his family and the medical profession of the state.

It will be recalled that in accordance with the authority of the Council, a special feature was included with the January, 1940, issue of the journal in the publication of a fifty-two-page supplement and of 600 additional copies of the issue. The cost of this supplement was charged against the net cash earnings for 1939.

There has now been entered $2,763.84 to the credit of MINNESOTA MEDICINE in the special fund. This includes the net cash earnings for 1939 and 1940. It is understood that this fund may be used at the discretion of the Editing and Publishing Committee, when such use is approved by the Council.

Herewith is the financial report and the operating report for the year of 1940.

MINNESOTA MEDICINE

CASH RECEIPTS AND DISBURSEMENTS

For the Period January 1, 1940, Through December 31, 1940

SOURCE OF CASH RECEIPTS		
Display Advertising		$10,145.38
Member Subscriptions		4,931.50
Non-member Subscriptions		513.55
Reprint Income		151.58
Bad Accounts Recovered		117.40
		$15,859.41
Less:		
Discounts and Commissions		
Advertising	$1,367.75	
Subscriptions	14.25	1,382.00
		$14,477.41
Cash retained from 1939 Surplus to cover 52-page Special Supplement included in the January, 1940, Issue		440.25
		$14,917.66
CASH DISBURSEMENTS		
Journal Expense		$12,952.64
Cost of 52-page Special Supplement included in the January, 1940, issue		440.25
		$13,392.89
Cash Surplus for Period		$ 1,524.77
Accounts Receivable January 1, 1940	$848.86	
Accounts Receivable December 31, 1940	$774.28	

STATEMENT OF INCOME AND EXPENSE AND PROFIT AND LOSS

For the Period January 1, 1940, Through December 31, 1940

INCOME	ACCRUAL BASIS	
Display Advertising (Includes $594.16—A.M.A. Dividend)		$10,053.03
Member Subscriptions		4,931.50
Non-member Subscriptions		513.55
Miscellaneous Income		10.17
Reprint Income		160.28
Bad Accounts Recovered (See Schedule A)		117.40
		$15,785.93
Less:		
Bad Accounts Charged Off (See Schedule A)		1.10
		$15,784.83
EXPENSE		
Journal Expense (Includes expense of Special 52-page Supplement) (See Schedule B)		$13,392.89
Discount and Commissions		
Advertising	1,367.75	
Subscriptions	14.25	
		$14,774.89
Profit for Period		$ 1,009.94

SCHEDULE A

BAD ACCOUNTS RECOVERED

Mudcura Sanitarium	$ 70.00
Sonotone Minnesota Co.	47.40
	$ 117.40

BAD ACCOUNTS CHARGED OFF

Lucille Fisher	$ 1.10

SCHEDULE B

Printing Expense—includes composition, presswork and bindery expense	$ 6,431.55
Paper Stock	1,591.73
Illustrations	436.21
Dr. Carl B. Drake—Editorial Fee	1,200.00
Second Class Postage and postage used on Minneapolis and Foreign copies	429.85
Mailing Envelopes (Used for January, 1940, Issue)	36.00
Bruce Publishing Company Service fee (Covers business management, stenographic service, mechanical editing of all material, ordering all cuts, making up dummy, mailing out all proofs, bookkeeping, billing and collecting all accounts, keeping up mailing list, etc.)	1,680.00
Bruce Publishing Company (Covers telephone, telegrams, addressograph plates, etc.)	132.00
Advertising Commissions (Includes 5% received from advertising placed thru CMAB)	1,260.33

1940 Copyright Fee	24.00
Insurance Bond—J. R. Bruce, Bus. Mgr.	5.00
Exchange on checks	9.27
Stationery	24.45
Subscription solicitation letter in connection with January, 1940, Special Issue	50.25
Advertising solicitation letter	3.70
L. C. Smith Typewriter	63.55
A.M.A. Directory	15.00
	$13,392.89

E. M. HAMMES, M.D., *Chairman*

MEDICAL ADVISORY COMMITTEE

The Medical Advisory Committee has held no meetings this year. There has been nothing urgent enough to require the calling of a meeting, and the activities of this Committee have been purely advisory.

The Committee has received and scrutinized notifications and memoranda relative to a number of malpractice suits which have been threatened or actually instituted against some members of the Association in various parts of the State. In addition the Committee has, in several instances, conferred informally with representatives of insurers of physicians threatened or faced with malpractice suits. In addition, an effort has been made to continue the educational program, instituted by the Committee some years ago, in the form of editorials monthly in MINNESOTA MEDICINE.

W. H. HENGSTLER, M.D., *Chairman*

COMMITTEE ON INDUSTRIAL RELATIONS

One of the most important decisions ever handed down by the State Supreme Court in the field of industrial relations was issued May 3, 1940. This decision reversed action taken by the Industrial Commission in denying payment of medical fees for services of the physician-of-choice of a St. Paul fireman injured in line of duty. The decision ended a long dispute between the Ramsey County Medical Society and city employes and the St. Paul city government and definitely settled for the future the question of whether or not an injured workman has a right, under the Workman's Compensation law, to payment of medical fees to the physician of his own choice. Great credit is due the city employes' union of St. Paul, which successfully carried the appeal to the high court. Briefs were filed, as friends of the court, by the Minnesota State Federation of Labor and the Minnesota State Medical Association.

Letters are now being sent to all injured employes informing them of their rights in this matter.

No other special problems have come within the purview of the committee during the year.

STEPHEN H. BAXTER, M.D., *Chairman*

Doctor Will then called upon the chairmen of the Medical Economics Committee and its sub-committees for additional remarks.

DR. GEORGE EARL, chairman of the Medical Economics Committee: As the delegates know, the Medical Economics Committee is composed of several subcommittees all of which have excellent personnel. All have chairmen who are no John Aldens and are well able to speak for themselves and their work. You know how good their work has been.

I want only to leave this thought with you—I am quoting from Governor Stassen in a recent radio address: "I feel that this is a good example of an effort to meet a problem through private enterprise with just a minimum of government coöperation," Governor Stassen said. He was speaking about the group hospital service but he has applied the same thought often to medical problems. "It works out much better than to have the government take over the problem and add another government bureau and spend a lot more government funds. In the long run, our success in working out methods of this kind will determine just how effective our democratic form of government can be in the face of changing industrial and economic and social conditions. We should always be searching for better ways of meeting our problems through the initiative of the people, with the government simply helping the people to help themselves. In practice, the idea of a government as an agency of the people as a whole to help the people to help themselves is at the very foundation of democratic government. Other types of government start out with the idea that they want to take over and do everything for the people. Soon the people find this results in the people being told what they must do by the government and soon every phase of their lives and freedom and liberty are gone."

I recognize, of course, that in a war emergency things are different; but Stassen was not thinking of war emergencies; he was thinking of past tendencies and of future tendencies. I think that the Governor's statement, though from a layman, explains the essential purpose of the Medical Economics Committee. I am sure the chairmen who have done all the work have something to add.

DR. E. M. HAMMES, chairman of the Editing and Publishing Committee: I should like to point out that MINNESOTA MEDICINE has had its best year, this, year, from a scientific viewpoint and also from an economic viewpoint in spite of the war situation.

DR. W. A. COVENTRY, chairman of the Committee on Low Income and Indigent Problems: Caring for old age pensioners has been a problem ever since the beginning of the Social Security program. As you know, the government has ruled that they could not refuse to pay allowances for medical service if the patient did not have a receipt from his doctor. The thing is being threshed out now and the solution may be a separate fund, set up somewhere, between the county, state and federal governments, to take care of costs of medical services to these recipients of old age relief. If it can be worked out, it may solve many problems of all of us.

DR. A. W. ADSON, chairman of the Committee on Sickness Insurance: We have listened to many plans for sickness insurance, reviewed many plans now being employed in other states. The committee as a whole feels that the state organization should not become involved in development of a state plan. We are willing to coöperate and to provide information from our files for anybody who is interested in working out a sound system. We are not ready as a committee to advise any plan for Minnesota.

DR. F. A. OLSON, chairman of the Committee on Contract Practice: I would like to warn the House of Delegates about the varieties of group medicine and contract medicine that are springing up in all parts of the country. They require watching.

It was moved, seconded, and carried that the recommendations of the Reference Committee on Medical Economics reports be accepted.

Doctor Will then called for the report of the Reference Committee on Medical Education reports, Dr. R. R. Cranmer, chairman. The following reports were covered.

COMMITTEE ON HOSPITALS AND MEDICAL EDUCATION

Working in conjunction with the Minnesota Hospital Association and the State Department of Health over a period of more than a year, your committee begs to report that there has finally evolved a bill for the control by licensing of convalescent homes, rest homes, and other institutions caring for the sick in the state of Minnesota. It is hoped that this bill will be passed by the present State Legislature with your backing and that it will eventually correct the irregularities in the care of the sick so well known to physicians.

A review of various factors surrounding county medical society meetings of our state is being planned. With this and other information it is hoped that an article will be forthcoming with an aim at setting forth basic rules and principles leading to successful county society medical meetings.

A. H. WELLS, M.D., *Chairman*

COMMITTEE ON PUBLIC HEALTH NURSING

The most important matter brought before the committee this year was the revision and elaboration of the "Suggested Polices and Standing Orders for Public Health Nurses." These suggested regulations are presented as standards by which political organizations employing public health nurses may guide them-

selves in setting up the standing orders and policies of such services. These were adopted by the state organization for public health nursing, the public health nursing division of the State Board of Health, and approved by your Council during the past year.

Discussion was had among the committee members on the need of producing a similar outline of standing orders and policies for nurses in industry, but it was thought that the time was not ripe for this move and it is held in abeyance until such time as there shall be more demand for it.

The bill for state aid for public health nursing in counties was submitted to the committee for study. Copies of the proposed bill were sent to the members for their comment and discussion. With some slight changes by members of the committee, the proposed bill was sent to your Council for approval, after it had received the approval of the State Board of Health and the state organization for public health nursing. The bill did not pass in the Legislature.

C. A. SCHERER, M.D., *Chairman*

COMMITTEE ON SYPHILIS

The syphilis committee in coöperation with the committee appointed by the President of the State Board of Health have undertaken during the past year a serological survey in cooperation with some laboratories in the state. Specimens of blood were collected from known syphilitics and known nonsyphilitics and distributed through the efforts of the State Health Department to the various laboratories involved in the undertaking. Each laboratory accordingly examined each specimen of blood within forty-eight hours after it was drawn.

There were nineteen of the twenty-eight laboratories in the state doing serologic work, participating in this study. A total of forty-four test performances as conducted in the nineteen different laboratories were included; eleven of these were complement fixation tests while thirty-three were flocculation tests. There were ninety-nine patients with syphilis which included at least eight varieties of the disease. Most of the syphilitics had been treated for more than one year. There were likewise ninety-nine non-syphilitics. The plan of collecting the blood and its distribution was carried out by the State Board of Health and by the collaborating laboratories; it was adopted from the plan established by The Serologic Committee in conjunction with the United States Public Health Service.

It was obvious from the study that some of the laboratories were in need of improving their technique and as a result of this checking, many of the participating laboratories have clearly indicated their interest and efforts in improving their tests. The complete report will be published in more detail in MINNESOTA MEDICINE. A similar study for the year 1941 is now under way in which thirty-two laboratories, including the State Department of Health, are participating. No pooled sera are employed as was done last year; all specimens to be tested this year will be of whole blood from known syphilitics, known normals, or individuals available for further study in event of any question as to diagnosis.

It is the belief of this committee that the continuation of such studies and the informal interchecking will be mutually beneficial to all laboratories participating in them.

PAUL A. O'LEARY, M.D., *Chairman*

REPORT OF THE COMMITTEE ON CANCER

Much of the work of the Committee on Cancer has been advisory to the Women's Field Army. Incorporation of the women's organization as the Women's Field Army of the Minnesota Society for the Prevention of Cancer was completed during the past year.

Nothing is done, either in carrying forward the education program against cancer or in organization work, without medical advice and the organization as constituted affords to the medical profession an effective instrument for authoritative and legitimate cancer education.

Headquarters for the newly incorporated association were moved during the past year to 481 Lowry Medical Arts Building in St. Paul. Space was made available without rental charge in the Medical Arts building through the courtesy of the building management at the request of the chairman of this committee. In this more central location, the work of the membership campaign, final results of which are not yet available, was more conveniently carried forward. In addition, the Field Army was able to secure the aid of the state medical association office in securing speakers during the campaign and otherwise.

The committee coöperated with the Committee in charge of the Subject-of-the-Month program in selection of material for the cancer packet distributed in April. For the cancer packet this year special emphasis was placed upon cancer of the uterus and stress was laid publicly upon the need for routine examinations after forty to catch and give early treatment for cancer of the uterus.

M. W. ALBERTS, M.D., *Chairman*

COMMITTEE ON CHILD HEALTH

At the first meeting on January 10, 1941, the objectives of the committee were stated as follows: (1) to consider all matters pertaining to improvement of the health of infants and children in the State of Minnesota, and (2) to formulate recommendations to the officers of the Minnesota State Medical Association regarding such matters.

A thorough discussion was carried out on the subject of the course in pediatrics which was to be presented at the Center for Continuation Study to representatives of county and district medical societies and financed by the State Board of Health with federal funds. The course was outlined by W. A. O'Brien and the manner of arrangements for selection of participants was explained by V. Wilson, Director of the Division of Child Hygiene of the State Board of Health. It was agreed that the course presented in 1940 had been highly successful. However, greater efforts were to be made to have the material carried to the various medical societies by the representatives so that the effects of the teaching would be made as general as possible.

It was recognized that the greatest opportunity for decreasing infant morbidity and mortality is now in the field of prematurity. For this reason, greatest stress in the course is to be placed upon this phase. At the present time, it is difficult or even impossible to evaluate the results of the current program for premature infant care sponsored by the State Board of Health and of the work of Miss Carlsrud who is making visits to all hospitals and to as many physicians as possible in connection with the instructional side of this program. Certain facts were emphasized. There is no adequate knowledge of the premature problem in the state. There is a great lack of information concerning the causes of death of premature as well as of mature infants, which is due in part to the probably very low percentage of postmortem examinations done on this group of patients. Proper consultation service for the care of premature and newborn infants may be wanting in a great part of the state. An experimental project might be set up in one county under the sponsorship of the Committee to investigate and secure postmortem examination of each infant who dies, and to provide proper consultation service and anything else which might result in more intelligent handling of the problem throughout the state. It is hoped that the aid of those attending the Continuation Course can be obtained to emphasize the necessity for better practice in the respective communities by bringing to the society members the monthly mortality reports from the State Board of Health, by carrying out postmortem examinations and investigation of the causes of death of infants and by urging proper measures to cut down the mortality rate. It appeared that this Committee is in a most strategic position to be of help in this program.

The distribution of an Immunization Card to each mother before she leaves the hospital with her newborn infant was discussed. Tentative approval of the committee was given to the distribution of such a card which will serve as a reminder that certain immunization procedures are desirable and on which such procedures can be recorded. The State Board of Health is to coöperate in the publication and distribution of these cards.

The Committee discussed the Follow-up Committees which are to be organized in all states to carry on the work of White House Conference on Child Welfare. Names of the Minnesota Committee are to be drawn up by Dr. Helmholz and Dr. Hilleboe, Medical Coördinator of the Social Welfare Division, to be presented for appointment by the Governor.

The Committee went on record as recommending the Public Welfare proposals incorporated in the Governor's speech before the Legislature, and particularly of the Governor's housing program.

It was suggested that the coöperation of the American Legion might properly be accepted in urging a general showing of the film, "Bobby Goes to School," released through a commercial firm and made under the direction of the American Academy of Pediatrics. The film is shown only with the express approval of local medical societies.

Facilities for the institutional care of psychotic and prepsychotic children were discussed. Extensive changes in present facilities and laws will be necessary to correct the present undesirable conditions. It was felt that this subject is so important and of such proportions as to merit separate consideration at some future meeting of the Committee. The Committee went on record as favoring the segregation for treatment of psychotic and prepsychotic children committed to state institutions in one ward of one institution and recommended that this action be forwarded to proper officials.

In order to maintain a working committee the chairman recommends to the President that appointments to this committee be made to fill the places vacated by Dr. C. W. Rumpf, who it is understood has left practice for work in the army and by Dr. C. A. Stewart, who has accepted the chair of pediatrics at University of Louisiana.

ROGER L. J. KENNEDY, M.D., *Chairman*

COMMITTEE ON VACCINATION AND IMMUNIZATION

Marked and heartening progress has been made during the past year in the work of protecting the children of Minnesota against smallpox and diphtheria.

As a result of the concerted state-wide campaign undertaken by the Committee on Vaccination and Immunization with the enthusiastic backing of the Council, more toxoid and vaccine have been distributed in 1940 and 41 through the State Board of Health than in any other like period. Medically sponsored immunization programs were begun in many communities where such community measures had been altogether lacking or only sporadic or without the backing of the local medical profession

before. A total of thirty-five counties, exclusive of the big cities, have carried on such programs in the state since January 1, 1941.

For many years, a lack of information about plans and experiences in other parts of the state has been felt by local medical bodies who were casting about for methods to go to work. Specific data on methods of organization and procedure has been lacking and the first step of the committee was to prepare, with the full coöperation of the State Board of Health, a complete packet of material which should provide definite information as to different types of plans already tried with success in various parts of the state, together with a general outline, specimen organization letters, records, etc., and the latest authoritative manual on vaccination from the United States Public Health Service together with comparable instruction on diphtheria immunization. Three alternative plans were outlined for guidance of medical societies undertaking such programs. These societies were specifically informed at the same time that they were entirely free to determine their own plans and to work out plans quite different from any of the three if they so wished. A total of 539 of these packets has been sent out to county officers, county contact committees, public health nurses and any others on request. The thanks of the committee are due the State Board of Health for their assistance in preparing the material.

Because many counties lack public health nurses and physicians sometimes find it difficult to organize a community campaign without the assistance of a public health nurse, the Board has also made available a qualified nurse to aid in these cmpaigns upon request of these physicians.

To date, this service has been requested as follows: Becker County, May 5 to 17; Clay County, May 15 to 30; Dodge and Todd Counties for both of which arrangements are being made; Lyon County where special arrangements were made with the Tracy School nurse.

It is interesting to note, in connection with the centenary of the coming of the first physician to Minnesota, that smallpox was prevalent in the early days of the Minnesota territory and that one of the first laboratories for the manufacture of vaccine in the entire country was established by Dr. Charles N. Hewitt, first secretary and executive officer of the newly organized State Board of Health in 1872. Physicians and health officers today are still struggling to extend the protection of vaccination to every baby in the state and until this goal is achieved there will still be unnecessary cases and deaths from the disease in Minnesota.

Diphtheria likewise will be completely wiped out as soon as all babies under a year old are immunized. It is the duty and responsibility of physicians as leaders in all sound public health measures in the community to take the initiative in bringing this practical and attainable millenium to pass in Minnesota.

L. R. CRITCHFIELD, M.D., *Chairman*

COMMITTEE ON OPHTHALMOLOGY

The only matter coming before the Committee on Ophthalmology pertained to unethical advertising by an optical company for a private practitioner.

The House of Vision, a Chicago optical company, with a branch in Minneapolis, had sent printed matter to patients of a licensed practitioner in western Minnesota. This printed matter was in the form of a questionnaire. It also urged people to consult an M.D. for eye examinations and then went on to name this particular doctor whom they should consult in their locality.

Inasmuch as this constituted unethical advertising, the Committee felt that the matter should immediately be called to the attention of the parties involved by the Secretary of the Minnesota State Medical Association.

T. R. FRITSCHE, M.D., *Chairman*

DOCTOR CRANMER: The Reference Committee recommends approval of all the reports on Hospital and Medical Education. They wish to call attention of the delegates to the fact that the bill providing for licensing of rest homes passed the Legislature since this report was prepared and we feel that it is a very fine bill indeed. Those of us who live in the large cities, particularly, realize what kinds of institutions these rest homes are. It is especially fortunate that the bill puts licensing of these homes into the hands of the State Board of Health, together with control of already existing institutions.

The subject of compulsory premarital examinations was discussed by the committee in connection with the report of the Committee on Syphilis and Social Diseases. We understand from Doctor Sogge that a bill providing for such examinations has been prepared but never presented for passage in Minnesota. Several other states, including Iowa, have passed such bills and it seems to me desirable that we should consider such action here.

Doctor Will then called for further remarks by committee chairmen.

DR. FRANCIS LYNCH, representing DR. PAUL O'LEARY, chairman of the Committee on Syphilis and Social Diseases: The matter of compulsory premarital examinations has been discussed by the committee but no formal action was taken because it was the general feeling that we were not quite ready to recommend such legislation. The principles are excellent. The difficulties are technical, in that many of the states which hastily passed such laws have run into trouble in the wording of the law. For instance, the wording has brought up the question: Shall the law read that an individual with a positive Wassermann shall not be allowed to marry? Must he be approved by his local physician? Must there be a committee to approve marriage for such individuals and what tests shall be accepted? That is, shall a Wassermann be enough or shall we have other tests? And what laboratories shall be accepted? It was the feeling of the committee that the first step is to raise the standard of all serological studies in the state in the smaller laboratories before going into any legislation of that type. We feel, just as Doctor Cranmer said, that the principle is just and that the requirements will eventually be met for Minnesota.

DR. L. R. CRITCHFIELD, chairman of the Committee on Vaccination and Immunization: We want to express our gratitude to the State Board of Health for their coöperation in the program of our committee. They have supplied us with information, inspiration and material. Thirty-five counties, as you know if you have read the report, are now carrying on vaccination and immunization programs—a good deal less than half the counties in the state. The objectives of this program can be achieved only by the activity of the local physician in his own community and of the local county and district societies. We must not halt in our efforts until all children in the state have been given the opportunity to be protected from smallpox and diphtheria.

It was moved, seconded and carried that report of the Reference Committee on Medical Education reports be accepted.

Doctor Will then called for the report of the Reference Committee on reports of Officers and Councilors, DR. R. M. BURNS, chairman.

Following are the reports:

SECRETARY AND EXECUTIVE SECRETARY

Medical defense in all of its aspects has occupied a major portion of the attention and time of the State Office staff during the past year and has constituted one of its most difficult problems.

The call to aid in the National Preparedness Program first presented itself in the American Medical Association questionnaire sent to every physician from AMA Headquarters. It became the responsibility of the Committee on Military Affairs and the State Office to see that complete returns were made on the questionnaires. As a result of the efforts of both, and also of the response of the membership, Minnesota took high ranking almost at once among the states of the Seventh Corps Area for the promptness and completeness of its return.

Following close upon the questionnaire came the draft and the request from the Governor for nominations from county medical societies from which to select draft board examiners. Also the request for nominations to Medical Advisory Boards and Induction Boards and for aid in all the complicated machinery of examinations for men inducted into military service.

The majority of the men thus selected have served and are serving without recompense of any kind except the satisfaction of a service well done. The high quality of their service, as shown by the low percentage of rejections by Induction Boards, and their willingness to serve have written another new and worthy chapter in the annals of military medicine in Minnesota.

Problems of Reserve Officers

More difficult of solution has been the problem presented by the call to active duty of more than 150 medical reserve officers. Many of them were from communities where they could ill be spared. Others were from communities where there was no other physician and it was necessary to take immediate action to protect the civilian population.

To aid in meeting the situation, a plan for a "pool" of physicians willing to substitute for men called to service was proposed by the Committee on Military Affairs and approved by the Council on December 15. To put this plan into effect an appeal was sent to every physician, to every intern and resident in the state and even to men who had retired from active practice, to send their names at once to the state office if they could substitute in any way for men called to active military duty. At the same time, our Attorney, Mr. Brist, drew up, at the instruction of the Council, a specimen contract designed to protect the interests of the physician who was leaving his practice and the man who was taking his place. The number of volunteers was small and far from adequate; but real assistance has been given in a large number of instances. In other instances where a serious injustice was being done, both to physicians and their communities, all possible influence has been brought to bear to secure deferment until substitutes can be found. Manifestly the State Association cannot intercede officially except in extreme cases. It has done everything possible, however, to mitigate the unhappy results of the abrupt, and often unwarranted, removal of so many young physicians. It has also sought to inform medical officers of their right under the law, if they are below the grade of captain, to resign from the service if they have dependents and heavy responsibilities at home.

To Safeguard The Future

The problem of safeguarding the supply of physicians in the future has caused grave concern to all medical leaders and educational authorities. Regulations just issued by Brig. Gen. Lewis B. Hershey, deputy director of the Selective Service System, indicate, however, that there is now an official realization of the danger of a national shortage of doctors. State and local draft boards were instructed early this month to defer all medical students who give "reasonable promise of becoming acceptable medical doctors." Interns were urged to apply for reserve commissions to secure a year's deferment and avoid induction into the service.

Medical Relief

Experience of the past year has amply demonstrated the soundness of Minnesota's plan for medical care to relief and social security clients.

County Medical Advisory Committees are well established in all parts of the state and working closely with local county welfare boards and they have the advice and assistance of the State Medical Advisory Committee which, in turn, meets regularly with the responsible heads of the Division of Social Welfare. Long standing sources of difficulty such as medical care for recipients of old age assistance, and the other aids are rapidly being adjusted. New regulations involving medical services are issued only after consultation with the Committee and the Committee, in turn, hears and aids in adjusting all difficulties referred to it through the Division and through the local committees in administration of medical services.

It was particularly interesting to those who attended this year's Conference on Medical Service in Chicago, to note that Minnesota stands way out in front for the smoothness and general efficiency of its machinery for medical relief.

Immunization Campaign

The Association has taken a significant stride forward, also, in other branches of public service this year. Its immunization and vaccination campaign initiated at the behest of the Council under the sponsorship of Committee on Immunization and Vaccination, has given an important impetus to the task of protecting Minnesota children from smallpox and diphtheria.

The campaign was materially assisted by the offer of the State Board of Health to put a nurse at the disposal, as far as possible, of the medically sponsored community campaigns where assistance of a nurse was needed.

Meeker County Plan

It was during this year, also, that plans for the Meeker County Tuberculosis Control Program took shape under sponsorship of the Committee on Tuberculosis. For this program, which takes its cue from the eradication of cattle tuberculosis by the veterinarians, the Council appropriated a fund to cover administrative expense and Meeker County physicians have agreed to contribute their services without charge. The plan calls for routine universal tuberculin testing of all Meeker County inhabitants and with x-ray for reactors to the test. It is hoped that this experiment, first of its kind in the world, may lead to similar programs in other counties and the eventual eradication of human tuberculosis in Minnesota. It is being watched with interest by the public health authoriites everywhere and may well be the first step toward a nation-wide program of tuberculosis control.

Expert Testimony

Another significant departure in the program of the Association began in 1940 with the formation of the Committee on Medical Testimony. In consultation with the Judicial Council of the state and the Minnesota State Bar Association, this Committee brought to the Council a plan for investigation and discipline of physicians judged to have deviated deliberately from the truth when testifying as experts. This plan, first of its kind ever undertaken by a medical body, calls for careful investigation of any case submitted to it and provides that findings be turned over to the State Board of Medical Examiners for discipline of physicians thus found guilty by the Committee. A letter was sent to all judges of the District Court of Minnesota inviting them to submit suspicious cases to the Committee for investigation and the plan received front-page publicity in the newspapers. Cordial and appreciative responses were received and a large number of judges and legal authorities everywhere are looking to the Minnesota plan as the first practical step by physicians in the country to deal with the problem of dishonest testimony.

Subject-of-the-Month Program

The so-called Subject-of-the-Month Program which had its inception two years ago has taken its place as one of the most popular and significant phases of the Association's educational program. Requests for the packet have steadily increased until an average of 500 packets are now sent out from the state office each month, under the auspices of the Committee on Public Health Education. Thanks of the Committee and the Association are due the Department of Postgraduate Education of the University of Minnesota, the State Board of Health and many individual members who have aided in preparing the interesting and important material in these packets. This program, also, is unique among the medical organizations of the country and has earned the commendations of many national educational authorities.

Radio-News Service

The regular educational services of the Association have continued as formerly, including the weekly radio broadcasts by Dr. W. A. O'Brien over WCCO, WLB and KDAL and the weekly news service to Minnesota rural papers. Both of these have directed their efforts toward various phases of the subject-of-the-month program with the obvious advantage that comes from a unified and directed effort.

In addition, the offer made each month, to provide speakers for any interested organization has met with surprising response and speakers have been booked in many parts of the state for PTA, Women's Clubs, luncheon and church groups.

College Lectures

Subjects offered for the regular College Lecture Course of the Association were based upon returns to a questionnaire sent by University investigators to recent graduates in which the latter were asked to name subjects about which they desired more information. Two lectures during the year were offered to each college and 26 lectures were booked in the state.

Legislative Session

This is the end of a legislative year, and the Committee on Public Policy, especially its chairman, Dr. L. L. Sogge and our Attorney, F. Manley Brist, have watched proceedings of the legislature closely and with complete success, as always, to protect the interests of medicine and the public health. The State Office has placed all of its facilities at the disposal of Dr. Sogge for this essential work.

Finances

The finances of the Association as indicated in detail in the report of the treasurer are in excellent condition. At the end of 1940, there was a surplus in the treasury of $8,619.84, of which $6,000.00 was turned over to the Permanent Investment Fund by order of the Council. Each annual meeting since 1937 has paid for itself and shown a profit to the Association and this great St. Paul meeting will be no exception though complete figures for expenses are not yet available. A profit, after all expenses were paid, of $3,451.68 was turned over to the treasury as a result of the Rochester meeting.

New Delegate

Membership in the Association has grown steadily to a figure which now entitles the Association to an additional delegate to the American Medical Association, according to an official notification of Dr. Olin West, Secretary and General Manager of the Association. A fourth delegate and alternate will accordingly be elected at this session.

Crisis

Medical organization in this country has reached a crisis in its public relations as a direct result of the decision against the American Medical Association in Washington. No matter what the eventual outcome of the appeal in that case may be, the integrity and ideals of the Association and of all medical organization is already being questioned and our good name is attacked in many quarters. This reaction was felt immediately after the decision was announced and it will require a concerted effort upon the part of all physicians and all leaders in public health and education to counteract it.

New State Exhibits

To aid in this effort, the State Office has prepared two exhibits both of which will be on display in the Exhibit Arena. One is designed to impress upon the physicians their individual responsibility to act as leaders in public health education. The other is a brief review by means of colored slides shown by selectro-slide of one hundred years of medicine in Minnesota. The latter was prepared with a view to showing at many types of lay exhibits and meetings. All delegates, especially, are urged to view these exhibits.

No report would be complete without a grateful acknowledgment of the willing coöperation of our officers and committees. They have responded to every call made upon them and, frequently, at a considerable sacrifice of time and attention. The extensive program now carried on by the Association would be impossible without their aid. Thanks are also due to members of the staff of the office who have cheerfully put in long hours of overtime for the success of our program.

One Hundred Years

We have reason to be proud of the accomplishments of 100 years of medicine in Minnesota. Nowhere in the world are men healthier or better protected against communicable disease. The challenge of the next 100 years will be social as well as scientific. We must protect the fruits of past labors as well as go forward and our progress must include constantly improved methods of distribution and delivery of service as well as improved methods of protection from death and disease.

The Minnesota State Medical Association will continue to take a leading role in accepting that challenge.

B. B. Souster, M.D., *Secretary*
R. R. Rosell, *Executive Secretary*

CHAIRMAN OF THE COUNCIL

At the time of the annual meeting in 1940, sessions of the Council held on April 21 and 22 were reported to the House of Delegates. Meetings were held on April 23 and 24 which have not yet been reported.

On April 23, 1940, one of the important matters discussed was the status of Rest Homes, especially in the Twin Cities. This matter was postponed for later discussion after the Committee on Hospitals and Medical Education had had time to study it. At that meeting it was also decided that a Council committee of three be appointed to consider the advisability of drawing up a uniform minimum fee schedule. The Chair appointed Doctor Elias, Doctor Will and Doctor Simons.

You will remember that at a previous Council meeting, representatives of insurance companies appeared before the Council and discussed in detail the various malpractice insurance policies. Mr. Brist gave a review of the situation as presented at the previous Council meeting. It was recommended by the Medical Advisory Committee that no particular company should be given preference but that members should investigate their policies thoroughly and carry adequate protection, detailed information to be obtained from the state office. It was also decided by the Council to request the Medical Advisory Committee to continue its study of various policies and the companies carrying malpractice insurance.

At the meeting on April 24, 1940, there was a rather extended discussion of the necessity for allowing more time for the meeting of the House of Delegates and the inadvisability of introducing extraneous material and irrelevant speeches. It was finally decided that the Council meet earlier and that the House of Delegates convene in the afternoon prior to the opening day of the annual session, so that the meeting of the House of Delegates might be extended into the evening if necessary. Arrangements for this procedure have been adopted.

It was also recommended that an effort be made to bring before the general membership of the Association through the delegates more detailed information concerning medical economics and arrange for more time at the meeting of the House of Delegates for general discussion.

The Council awarded the distinguished service medal to Dr. C. B. Wright of Minneapolis, subject to the approval of the House of Delegates. This award has not yet been confirmed by the House of Delegates but doubtless will be. Dr. Wright was informed of the action of the Council by the Chairman and flowers were sent to him at the hospital.

The Council decided to adopt Dr. Adams' suggestion that literature on medical economics and state medicine be placed in the public libraries of the state. This was referred to the Editorial Committee of the Committee on Public Health Education and has since been carried out in a very thorough manner.

Dr. R. L. J. Kennedy, Chairman of the sub-Committee on Child Welfare, recommended that there be appointed by the President a special scientific committee on Child Health, and that the Chairman be an ex officio member of the Committee on Public Health Education. His suggestion was adopted and led to a general discussion on the advisability of reconstruction of committees so that more effective action in scientific lines might be carried out. This discussion was resumed at a later meeting of the Council.

Since the annual meeting, the Council has held three sessions: September 22, 1940; December 15, 1940 and February 21, 1941. At the meeting on September 22, it was noted that the paid membership was 2,546, a slight increase over 1939. There was considerable discussion concerning the dues of members called to military service and a committee was appointed to make a study of this question.

Dr. J. M. Armstrong, for many years a member of the Editing and Publishing Committee and Chairman of the Historical Committee, announced his retirement from practice and resigned as Chairman of the Committee. A vote of appreciation was extended to Dr. Armstrong and it was requested that he continue at least as a member of the Historical Committee even if he did not desire to continue as Chairman.

The college lecture course was approved for 1940-41.

Dr. Hammes, newly appointed Chairman of the Committee on Medical Testimony, gave an extended report and the Council decided to continue this committee as a permanent committee to review court cases in which medical testimony has been given and in which a portion of the testimony appears to the court to have been so contradictory as to indicate that medical witnesses might be consciously deviating from the truth. The situation with respect to medical testimony has been so unsatisfactory in the courts that this committee was regarded by the Council as of great importance.

Dr. J. M. Hayes was appointed as delegate to the American Medical Association to fill the position created by the reapportionment of delegates. Dr. Will was appointed as alternate. Dr. Adson was appointed as alternate for the present delegate, Dr. Savage. There is one other delegate to the American Medical Association to be elected by the House of Delegates of the State Association.

At the meeting on December 15, 1940, the financial status of the Association was considered in detail. It was found possible to recommend the transfer of $6,000 to the Investment Advisory Agency. In 1939 the Finance Committee had been given the privilege of transferring $4,000 to the Investment Advisory Agency, and in 1938 $4,000 had likewise been transferred.

The Council is the finance committee of the Association and it might be well to call attention at this time to the progress which has been made since 1937. The improvement in the financial status of the Association has been due to coöperation on the part of all committees and officers but especially to the centralization of administrative activities and the efficiency of the Executive Secretary and the administrative staff. The routine work of committees has been carried out by the office personnel and charged to administration. The technical exhibits, thanks to the former constructive work of Dr. Meyerding and the present efficiency of Mr. Rosell, have more than paid the cost of the annual meetings. For many years our investment fund was increased only by interest received. It gradually grew from about $27,000 in 1933 to $32,000, par value, in 1938. On December 31, 1938, $4,000 was transferred from the general fund to the Investment Advisory Agency. In 1939, $4,000 was ear-marked for the Investment Advisory Agency and in 1940, $6,000 was so appropriated. On March 1, 1941, the cost value of securities and cash amounted to over $48,000. The market value at this time was over $45,000, the depreciation being almost entirely accounted for by $3,000 worth of bonds of Nicollet Avenue Properties which were purchased many years ago, at a time when they were regarded as sound.

Dr. Myers, Chairman of the Sub-committee on Tuberculosis, explained the tuberculosis control project proposed for Meeker County. This was given approval by the Council and an appropriation was made available for the work.

Mr. Finke, director of the Division of Social Welfare of the State, requested that present members of the Medical Advisory Committee be continued for another year. This was approved.

A report on the vaccine and immunization campaign in Minnesota showed that thirty-five counties had, up to that time, conducted vaccine or immunization campaigns, or both, in 1940. Active encouragment was given by the Council to this movement.

Dr. Chesley asked and received the support of the Council in obtaining appropriations from the legislature for the Division of Vital Statistics and Sanitation and for establishment of a Division of Industrial Hygiene.

The Committee to consider the payment of dues of members called into service reported in detail and it was decided to request the local societies to pay the dues of those members who themselves are unable to pay. This matter was referred to the local societies for their decision. It was also decided to maintain an approved list of physicians who are willing to take the place temporarily of physicians absent for military service, their contract to be approved by the State Association and agreed to by the parties concerned.

The Minnesota Hospital Service Association discussed in detail the proposed bill to be presented to the legislature as an enabling act which they stated was essential to the life of the Minnesota Hospital Service Association.

The various scientific and Council Committees were appointed and approved for 1941. The Council appointed a committee to make a study of scientific and nonscientific committees with a view to re-arranging the committees on a more effective basis.

The Chairman was absent from the meeting on February 21, 1941. Dr. Stewart, clerk of the Council, presided. At

this meeting there was extended discussion of a variety of topics: plans for prepaid medical service, compulsory automobile insurance, and medical relationships to the National Youth Administration and the Farm Security Administration.

A plan presented by the State Board of Health for a study of maternal mortality in Minnesota was approved by the Council.

A proposal for the consolidation of state institutions with the Division of Social Welfare of the State was thoroughly discussed and a committee of three was appointed which recommended that the situation be investigated by a qualified organization, such as the American Hospital Association, American College of Surgeons, or the American Medical Association.

A plan for physical examination and rehabilitation of clients of the National Youth Administration was referred to Dr. Coventry, Chairman of the Committee on Low Income and Indigent Problems, and was later voted on favorably by the Council by mail.

The Council unanimously approved of a resolution drawn up by the Committee on Child Health in regard to Governor Stassen's public welfare proposals, especially with respect to his housing plan.

The Council was informed concerning the several proposals of motion picture companies during the last year to portray the lives of the Doctors Mayo. These proposals so far have been checked. The Council approved of the attitude of the Board of Governors of the Mayo Clinic, to the effect that such a portrayal would be a violation of medical ethics and that these proposals could be reconsidered only in the event of approval by the Board of Trustees and House of Delegates of the American Medical Association, and by the Council and House of Delegates of the Minnesota State Medical Association. Since that time the Board of Trustees of the American Medical Association has decided against giving their approval.

These are some of the topics considered and actions taken by the Council during the year. Detailed minutes are open for inspection by any of the Delegates or other members.

May I again take this opportunity to express my appreciation of the fraternity, loyalty, honesty, tolerance, fairness, and good judgment of the members of the Council and the officers of the Association, and to commend the efficiency and ability of our legal adviser, our Executive Secretary and the administrative staff.

H. Z. GIFFIN, M.D.

TREASURER

The attached statement of cash receipts and disbursements for the year which ended December 31, 1940, was made by Shannon and Byers, Certified Public Accountants. who finished auditing the books of the association February 24, 1940, and found them to be correct in all respects.

In accordance with the request of the House of Delegates made at the 1940 meeting a comparative summary of the finances of the association in 1940 and 1941 is provided on page 2 of the statement. It will be noted from this comparison that there was a net profit of $5,038.34 in 1939, while the net profit for the year 1940 was $8,619.84. Of this sum $3,451.68 represents net earnings from sale of exhibit space at the Annual Meeting.

The finances of the association continue in excellent condition as the statement indicates. Delegates and members are urged to study the statement carefully for a better understanding of the administration of association affairs.

W. H. CONDIT, M.D.

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS FOR THE YEAR ENDED DECEMBER 31, 1940

CURRENT FUNDS

CASH ON HAND DECEMBER 31, 1939:		
American National Bank,		
checking account	$ 2,358.58	
savings account	18.89	
exhibit checking acct.	2,646.50	
exhibit savings acct.	1,290.35	
Farmers & Merchants Bank,		
savings account	5,177.59	
First National Bank,		
savings account	37.66	
		$11,529.57
CASH RECEIPTS, YEAR 1940:		
Dues collected:		
For year 1939 and prior	$ 270.00	
For year 1940	33,472.50	
For year 1941	4,725.00	38,467.50
Technical Exhibit rentals collected:		
For year 1940	5,107.50	
For year 1941	2,877.50	7,985.00
Annual meeting banquet and luncheons		1,074.50
Bruce Publishing Co. (Minn. Med.)		1,239.07
Interest and dividends		358.05
Social security tax refund		577.61
Total receipts		$49,701.73
		$61,231.30
CASH DISBURSEMENTS, YEAR 1940:		
Special committees:		
Diabetes	278.39	
Historical	6.00	
Hospital and medical education	19.94	
Medical Advisory	24.95	
Medical economics	713.58	
Public health education and radio	3,732.12	
Public policy	6,699.97	
State health relations	21.50	
Unbudgeted committees	657.44	
Conferences and meetings:		
Technical Exhibit and Annual meeting	5,677.24	
A.M.A. delegates	309.10	
Conferences	86.55	
Council meetings	268.82	
County officers' meetings	397.75	
Minnesota Medicine	4,931.50	
Office equipment	1,174.79	
Membership expense	140.92	
President's contingent fund	298.94	
Administrative:		
Executive secretary's salary	5,000.00	
expenses	1,257.72	
Office salaries	5,430.00	
Office salaries, extra help	52.65	
Office rent	1,410.00	
Office supplies	216.42	
Postage	388.05	
Telephone and telegraph	349.97	
Miscellaneous expense	244.97	
Audit and insurance	213.94	
Minnesota unemployment tax	268.38	
Federal unemployment tax	30.30	
Social security tax	92.55	
Periodicals	84.90	
Secretary's salary	200.00	
Secretary's expenses	56.88	
Treasurer's salary	100.00	
Total disbursements		40,836.23
CASH ON HAND, DECEMBER 31, 1940:		
American National Bank,		
checking accounts	1,540.49	
savings account	1,074.73	
exhibit checking acct.	2,828.26	
exhibit savings acct.	1,305.32	
Farmers & Merchants, savings account	5,281.93	
First National Bank, savings account	150.83	
First Federal Savings and Loan Association	3,113.05	
Minnesota Federal Savings and Loan Association	5,100.46	
TOTAL CASH ON HAND		$20,395.07

COMPARATIVE SUMMARY

Income:	*Year 1940*	*Year 1939*
Income from dues	$33,277.50	$32,429.00
Other income	4,943.20	2,843.43
	38,220.70	35,272.43
Expenses:		
Special committees	12,492.06	12,934.89
Conference and meetings	1,126.60	873.46
Administrative	15,982.20	16,425.74
	29,600.86	30,234.09
NET PROFIT	$ 8,619.84	$ 5,038.34

COUNCILOR OF THE FIRST DISTRICT

I know of no major problems concerning the societies of the First District. Last year attention was called to the practice of medicine by the Eagles Lodge of Austin and the support given by the Mower County Medical Society and the Council of the State Medical Association in the legal proceedings involved. Since that time this matter has been appealed to the Supreme Court of Minnesota and an opinion adverse to the Eagles Lodge rendered. The lodge has ceased furnishing medical care and the physician involved has become a member of the local society. I understand that there is some national

effort through Congress to permit the Eagles Lodge to supply medical care. This situation is of national importance especially in light of the recent adverse decision of the suit in Washington against the American Medical Association et al. Special attention on the part of the State Association will doubtless be necessary in combating national efforts of this type.

There is still some reason to believe that coöperation between county welfare boards and the advisory committees of the component medical societies could be improved.

H. Z. Giffin, M.D.

COUNCILOR OF THE SECOND DISTRICT

There has probably been more activity in the line of scientific and economic meetings in this district this year than in any previous year. Harmony and very marked loyalty to the State Association has been noteworthy. Our esteemed member, Dr. Frank M. Manson of Worthington, Minnesota, has retired from active practice but happily remains in our society as an affiliate member.

There is no doubt but that the physicians of Southwestern Minnesota are keeping to the highest standards of good medical practice.

L. L. Sogge, M.D.

COUNCILOR OF THE THIRD DISTRICT

The membership of the Third District shows an increase over the same period of a year ago.

The societies of this district have functioned well, with the result that problems have been met successfully, as they arose.

The tuberculosis project, carried on in Meeker County, promises to become a success, and it is hoped that it may serve as an example for the rest of the state, and, perhaps, for the nation as well. Much credit should be given to Dr. J. A. Myers, Chairman of the Sub-committee on Tuberculosis, and to the members of the Meeker County Society for their enthusiastic support of this worthy cause.

The effect of the drought, which hit part of the Third District very hard, is gradually wearing off, and conditions are again more nearly normal.

The problem of caring for the indigent in need of medical and hospital care, in my district, has been greatly lessened through the aid of the Social Welfare Department and by the sympathetic understanding of Mr. Finke and Dr. Hilleboe. Although a continuance of this help will of necessity be needed for an indefinite period, it is my hope and belief that, with continued favorable crop conditions, many of these people will regain their courage and self-reliance and become self-supporting.

The hospital insurance plan, offered by the Minnesota Hospital Service Association, is being well received among the farming population and promises to be a success.

C. M. Johnson, M.D.

COUNCILOR OF THE FOURTH DISTRICT

During the past year things have been running smoothly in the Fourth District. The component societies have all been active in routine professional work and also laying considerable emphasis on matters of medical economics.

Immunization and vaccination in schools has been done and accepted well by the public. At present Mantoux tests are being given.

The membership is up as it should be, and each county is working out its problems of care of the indigent, with the doctors ready to do their share.

Of special interest in the past year, has been the arrangement for Draft Boards, as well as Advisory Boards, with twelve Draft Districts and two Draft Boards in this Councilor area. The men have been very coöperative in accepting positions on both the Draft and Advisory Boards, there being very few refusals.

There was only one medico-legal malpractice case that came to trial, and I am happy to report that the doctor involved took the right attitude of sticking to the truth and yet protecting the other doctor. The advice which our Association has given in the handling of these cases since the Advisory Board has been established, is remarkable; and the lesson that it brings home is—treat the other fellow as you want to be treated yourself—and nine times out of ten no trouble will be started.

The Minnesota Hospital Service Association has extended its work in the communities of this district, adding a number of hospitals.

One of the doctors of this district has been made an affiliate member during the year.

About a half dozen doctors in this District refused or overlooked the filling out of the blanks for the Medical Preparedness Program for the AMA—some for personal reasons; others apparently didn't see the importance of it. This, of course, should not be so, since the medical profession has always been ready to do its bit for the country.

The matter of taking care of dues for those absent in medical service, has been nicely handled in the various County Societies.

The death of Dr. J. S. Holbrook, former Councilor of this district, occurred during the past year, and I wish again at this point to emphasize the great loss to the District.

I wish to express my appreciation for the coöperation of the societies and officers of this district, and to offer my services at any time in the near future for their welfare.

A. E. Sohmer, M.D.

COUNCILOR OF THE FIFTH DISTRICT

During the past year there have been no major problems that have come up for consideration.

A conference was held with the Executive Committee of the Ramsey County Medical Society regarding the status of dues to be paid by members that have entered military service. At that time I explained to the committee the position that had been taken by the State Council.

The component societies of this district have been very cooperative in supplying information at different times that has been requested through the central office.

E. M. Jones, M.D.

COUNCILOR OF THE SIXTH DISTRICT

Since Sepember, 1941, the membership of the Hennepin County Medical Society has increased from 678 to 698. In addition to these active memberships courtesy membership has been extended to twelve visiting physicians connected with the Veterans Administration and the Navy Recruiting Service. Also about eighty-four interns, residents and fellows now have Junior membership in the society.

The society has been active in extending its influence in community affairs and through a new department, Community Planning, is attempting to improve the coördination of private and public agencies to prevent duplication of service.

The Council probably will be interested to know that the International Assembly of the Interstate Post Graduate Medical Association will be held in Minneapolis, October 13 to 17.

C. A. Stewart, M.D.

COUNCILOR OF THE SEVENTH DISTRICT

Although attendance of medical meetings and harmony among physicians in the Seventh Councilor District have been at a high level during the past year, some features of medical economics and some problems arising from induction of physicians into service under the National Defense Act have caused grave concern.

Free choice of physicians for medical care of the indigent, medical fees for relief patients, and abuses of rights and privileges in medical care of the indigent have been the major economic problems. So far as is known, each such problem has been harmoniously solved through coöperative efforts of the physicians and personnel of the Department of Social Security.

Prior to induction of physicians into the military service under the National Defense Act, questions were raised concerning maldistribution of physicians in north-central Minnesota. Spot-maps showing location of physicians, together with maps showing population distribution as prepared by R. R. Rosell, Executive Secretary, and the personnel of his office, demonstrated clearly that adequate medical care is within the reach of the most distant settlers of this sparsely populated territory.

However, since mobilization of medical personnel under the National Defense Act started, physicians have been called from some localities which suffer from lack of, or insufficient, physicians to provide medical care. This will be especially true should any epidemic appear. Future maldistribution of physicians, should it develop to great proportions, should, however, be attributed to the necessities of National Defense, and not to faultiness of the American System of Medicine.

Edwin J. Simons, M.D.

COUNCILOR OF THE EIGHTH DISTRICT

During the past year the Councilor of the eighth district has attended a number of meetings in his district at which Farm Security and National Youth Administration plans have been discussed with local societies. He has also attended Council meetings and other gatherings, rendering what assistance he could in furthering the society work. It has seemed that he could better serve by listening carefully to the plans and opinions of R. R. Rosell, F. Manley Brist, our attorney, B. J. Branton, our president, and the various committee chairmen than by attempting to gear into the motor that drives—possibly I had better say drags—the Minnesota State Medical Association.

As long as this type of officer is continued, the work of Councilor will not be too burdensome. At times it is really pleasant.

W. L. Burnap, M.D.

COUNCILOR OF THE NINTH DISTRICT

The St. Louis County Medical Society, which comprises the ninth district of the association, reports to your body another successful year of activity and unison in the spirit of its membership. Meetings have been held regularly and a close contact has been maintained with members throughout the whole district. Officers meet regularly with the Range Medical Society at their meetings and recently by-laws were amended to require two of the meetings of the year to be held on the range. About half of each meeting has usually been given to the consideration of economic affairs and information from the state office.

The Secretaries' Conference was attended by a majority of the officers and was well reviewed at the subsequent meeting.

The membership has responded unanimously in the survey of medical defense by the American Medical Association. An adequate defense fund has been subscribed for the payment of dues of its members called into service. Members associated

with the draft boards are contributing all services that have been required.

At the present time, examinations are being made for the National Youth Administration in accordance with their request and schedule.

An opportunity was presented to the Itasca County Medical Group to participate in a medical insurance plan to recipients of farm loans made by the Federal Security Administration. Following a meeting between the Itasca County physicians and representatives of the F.S.A., the plan was rejected.

Courses in pediatrics and obstetrics, sponsored by the State Board of Health, have been attended by all allotted and well reported to the whole membership in Duluth and other districts.

F. J. ELIAS, M.D.

DOCTOR BURNS: The Reference Committee read, considered, approved and recommended adoption of all officer and councilor reports.

Doctor Will then called for additional remarks from those whose reports were covered and, there being none, it was moved, seconded and carried that they be accepted.

Doctor Will called for the reports of the Reference Committee on State Health Relations, Dr. J. M. Hayes of Minneapolis, chairman.

Following are the reports:

COMMITTEE ON STATE HEALTH RELATIONS

The committee on State Health Relations has continued to coöperate with the various other committees and officers of the Society and with the State Board of Health. The committee has had several meetings itself during the past year.

An attempt has been made to follow up as to how well the State Institutions were able to carry out the recommendations made by our committee several years ago. This follow-up is still being completed.

The possibility of using qualified pathologists as medical examiners in place of coroners or supplemental to them has been proposed. The matter is being studied now as to its availability for the large cities and possibly for the state at large but further study is necessary.

The chairman has on the request of the Council attended two meetings with the Legion regarding its proposed program for improvement of national health and welfare through physical education and has agreed to act on an advisory committee as a representative of the State Medical Association. At present the definite proposed activities have been referred to various sub-committees for study and nothing further can be reported thus far.

The Legion's proposal for periodical health examinations which our committee considered with the Legion two or three years ago has apparently not been established on a state-wide basis by the Legion, although there has been some activity in a few localities in the state. Our coöperation has not been asked during the past year in that regard.

In our report a year ago we mentioned our offer to assist the State Civil Service Board. Our assistance was not requested by the Board or the Interim Committee. However, Dr. Earl represented us in the hearing in January when representatives from the dental association also were heard. Dr. Earl's discussion evidently helped greatly in improving the Civil Service status of various professional employes of the state.

T. H. SWEETSER, M.D., *Chairman*

COMMITTEE ON UNIVERSITY RELATIONS

Work of the Committee on University Relations has been concerned with several inquiries and recommendations brought to it from outside sources. One concerned medical training given to students in physical education at the University. Reports that these non-medical students were trained in the use of the stethoscope were found to be without foundation in fact.

The committee has also had under consideration a new recommendation for bestowal of the Association's Distinguished Service Medal. Action on this latter matter will undoubtedly be taken when the committee next meets at the time of the Annual Meeting.

Dr. H. S. Diehl, Dean of Medical Sciences, and the faculty of the University Medical School continue to work in sympathetic coöperation with the practicing profession represented by the Minnesota State Medical Association to protect the physician and extend the public welware in Minnesota.

B. S. ADAMS, M.D., *Chairman*

NOTE: *The Committee on Public Policy submitted a detailed mimeographed report which will not be published but interested members may apply to State Association headquarters for copies.*

DR. J. M. HAYES, chairman of the Reference Committee on State Health Relations, reports: The committee believes there is no more important unit in the entire state medical association organization than the Public Policy Committee headed by Doctor Sogge. We are going to ask Doctor Sogge to read his report to you tonight but in the meantime, may I point out to you that few of the delegates realize how much time Doctor Sogge puts in at this work. I am a member of his committee but neither I, nor any of the rest of us, can claim much credit for the splendid record he has made.

Most of you will recall the investigation of medical services at State Institutions which was undertaken earlier by Doctor Sweetser and his State Health Relations committee. You may not know that many of the suggestions made at that time have been followed by the state department and that the study still goes on to see that all necessary improvements are made.

A word should be said about the function the committee and its chairman is performing in an advisory capacity for the American Legion program for national health through improved physical education. Until the committee stepped in the Legion program was not under much supervision but they are willingly cooperating with medicine now through the medium of Doctor Sweetser's group.

Attention should be called to the fact, also, that the Committee on University Relations, and Doctor Adams, as chairman, has been in close touch with the University authorities serving as a medium for discussion of joint interests of both groups. The committee recommends that all these reports be accepted.

Doctor Will called attention of the delegates again to the announcement that Doctor Sogge would present his report in person at the evening session and there being no additional remarks from chairmen of the other two committees, he announced that action by the delegates on the reports would be deferred until after Doctor Sogge's verbal report.

Doctor Will then called for the report of the Reference Committee on Lay Education reports, Dr. O. J. Seifert, chairman (represented on the floor by Dr. P. C. Benton).

Following are the reports:

PUBLIC HEALTH EDUCATION

As chairman of the Committee on Public Health Education it pleases me to comment upon our activities and to pay particular tribute to Mr. Rosell, to Mrs. Fitzgerald, and the staff of the society's headquarters, for the very efficient manner in which they are directing our affairs.

I wish particularly to call attention, from the standpoint of health education, to the very great value of the monthly packets that have been sent out. In a measure, these monthly reports and assemblages of vital information to doctors, have given the University an opportunity to hold practical contacts with practicing physicians. To the various medical staffs and groups at the University go our sincere thanks, and on behalf of all the members of the state society I extend to them our very grateful thanks. Obviously, the same thanks go to all those outside the University, in that we may call extracurricular activities, for all they have done to develop and make useful carefully drafted summaries outlined in each monthly packet.

An expression of thanks should also go to the various newspapers of the state and elsewhere who have drawn upon this material and used it to increase the interest in their own publications, and made available to their readers useful, important and helpful guides.

In the same order, the radio programs, masterfully given by Dr. William O'Brien, have continued effectively and splendidly, and the public response has been most gratifying.

The Speakers' Bureau has functioned well, and has provided speakers for many societies, clubs, and several university and teaching institutions.

Great credit goes to Dr. A. B. Stewart of Owatonna for continuing his interest along the line of first aid in connection with the Red Cross. At the recent sectional meeting of the American College of Surgeons held at Minneapolis it was a pleasure to note that he was not only present, but actively engaged in the round table discussions now so necessarily implemented and coördinated with defense movements and the development of our military forces.

Our most active sub-committee has been that under the able guidance of Dr. J. A. Myers, and concerns the study, well known to most of you, centering around the work of the physicians of Meeker County and Litchfield. This committee

has held many meetings at Litchfield which, unfortunately, your committee head was unable to attend. However, it is striking and noteworthy that the minutes of the various meetings held indicate the constant attendance not only of most of the physicians of Meeker County but many of the men connected with the administration of the state society and others interested in our tuberculosis sanatoria and tuberculosis prevention in general.

We must all watch for the ultimate reports on this investigation, because it is a critical attempt to approach the problem of the prevention of tuberculosis along a concerted plan, and it promises a great deal. In due time this sub-committee will present to the state society suggestions which can ultimately guide the state as a whole in its campaign to eliminate tuberculosis.

E. L. TUOHY, M.D., *Chairman*

RADIO COMMITTEE

For the past year the Minnesota State Medical Association has sponsored a program each Saturday from 11:00 to 11:15 a.m., since changed to 10:45 to 11:00 a.m., over radio station WCCO, Minneapolis, and St. Paul; WLB, University of Minnesota; and KDAL, Duluth (except as noted below).

The speaker has been William A. O'Brien, Professor of Preventive Medicine and Public Health, Medical School, University of Minnesota. The subjects follow:

1940	June	1	What Is Diabetes
		8	Management of Diabetes in Children
		15	Management of Diabetes in Adults
		22	(No broadcast)
		29	Fourth of July Injuries
	July	6	Summer Skin Problems
		13	The Value of a Vacation
		20	Gastro-intestinal Diseases in Summer
		27	Toothache
	August	3	Leg Cramps
		10	Hyperchlorhydria
		17	Embolism
		24	Sacro-iliac Disease
		31	New Dentures
	September	7	Cause of Home Accidents
		14	Prevention of Home Accidents
		21	First Aid in the Home
		28	Injury of the Teeth
	October	4	Scarlet Fever
		11	Whooping Cough
		18	Measles
		25	Growth of the Teeth
	November	2	Eye Injuries
		9	Glaucoma
		16	The Crosseyed Child
		23	Cataracts
		30	Children's Dentistry
	December	7	Otitis Media
		14	Cause of Hearing Loss
		21	When Deafness Comes
		28	Modern Scientific Achievements
1941	January	4	Common Cold
		11	Influenza
		18	Pneumonia
		25	Exodontia
	February	1	Posture and Backache
		8	Causes of Backache
		15	Back Injury
		22	Periodontia
	March	1	Vital Statistics
		8	Records of Birth
		15	Life's Increasing Span
		22	Diseases of Middle Life
		29	Orthodontia
	April	5	Cancer in Women
		12	Radium and X-ray
		19	When Cancer Begins
		26	Tumors of the Mouth
	May	3	Summer Round-up
		10	The Community Hospital
		17	Maternal Hygiene
		24	Better Health for Babies
		31	Care of Children's Teeth

The last broadcast in each month was usually sponsored by the Minnesota State Dental Association. The Dental Association has repeatedly expressed its appreciation to the medical profession for this coöperative effort. The subject material for each month except during the summer was keyed with the educational packet issued by the Minnesota State Medical Association for physicians.

Radio station WCCO has given time to the Minnesota State Medical Association each week since April 4, 1928 (over 13 years), for which we should be duly grateful, as it is the most powerful station in the Northwest.

A new program was started September 25, 1940, over radio station WLB, entitled "Your Health and You." It was given Wednesday from 11:00 until 11:15 a.m. for pupils in school grades six through nine. Students listened in groups with the teacher. For wider coverage, radio station WLB sent the program over the Northcentral Broadcasting System (Mutual). The programs were arranged by Dr. William A. O'Brien, who gave each talk. The program is endorsed by the Minnesota State Medical Association and the Minnesota Public Health Association. It was learned through a survey that more than 8,000 school children "attended" these public health classes. If wider publicity and greater coöperation are given to this effort next year, more junior high schools will take the program. The subjects were as follows:

September	25	Health Ideas and Practices
October	2	Foods We Eat
	9	Nutrition of Body
	16	Weight and Health
	23	Mind and Body
	30	Rest and Sleep
November	6	Feet and Posture
	13	Play—the Business of Childhood
	20	Cleanliness and Godliness
	27	Air and Sun
December	4	Eyes and Ears
	11	Mouth—Gateway to Health
	18	Fads and Fallacies
January	8	Prevention versus Cure
	15	Community Health
February	5	Contagious Diseases
	12	Accidents and You
	19	Allergic Children
	26	Tuberculosis, the Foe of Youth
March	5	Do You Hear Well?
	12	The Common Cold
	19	Why Glasses Are Worn
	26	Your Teeth
April	2	Appendicitis
	9	Milk—the Perfect Food
	16	Specific Disease Protection
	23	Protective Foods
	30	Diphtheria Prevention
May	7	Diabetes and Insulin
	14	Smallpox Prevention
	21	Health Habits

It will be noted that the subjects for the year have coincided as far as possible with the so-called "subject-of-the-month" program of the association thus providing an exceedingly valuable coördination of educational effort between the radio, newspaper and packet services of the association.

Additional radio programs on other networks are under discussion and will be worked out when the most effective and practicable type of broadcast for the purpose has been determined. In the meantime, activity by representatives of local medical societies wherever there are broadcasting stations is highly desirable. The representative and type of program should be determined by the local medical group and the broadcast should be sponsored by the medical society. Assistance of the committee is available to any society in the state which contemplates inauguration of local radio programs.

R. M. BURNS, M.D., *Chairman*

COMMITTEE ON THE CONSERVATION OF HEARING

In spite of many obstacles definite progress in the work of this committee has been made during the past year. The unsettled condition in the State Department of Education, the concentration of medical and public interest in national preparedness and the failure to secure legislation to provide funds to make possible uniform, standardized hearing tests of school children through coöperation of the State Board of Health and the State Department of Education have proved disappointing. Nevertheless your committee can report gratifying growth of interest among the medical profession and general public in this field of preventive medicine.

There is a definite increase in the number of schools throughout the state in which modern hearing tests are employed.

Your members have presented the subject before various public health and educational groups.

Under the joint sponsorship of the Department of Public Health and Preventive Medicine and the Department of Ophthalmology and Otolaryngology of the University of Minnesota a special course on the conservation of hearing for public health nurses, medical social service workers and other qualified persons has been instituted. This course is offered during the spring quarter and the first half of the summer session.

Studies are now being conducted to determine the relative advantages of tests made by the phonograph and pure tone audiometers as used for screening purposes among school and industrial groups. Recently it has become known that many younger individuals have significant hearing losses for the high tones which are not disclosed by the phonograph audiometer.

This committee has available a limited amount of equipment to loan under certain conditions to schools which can provide responsible, experienced nurses or technicians who are in a position to make satisfactory demonstration or introductory hearing tests. It can also provide speakers on the subject of conserving the hearing before local or county medical, public health and parent-teacher groups.

HORACE NEWHART, M.D., *Chairman*

COMMITTEE ON MATERNAL WELFARE

During the past year a preliminary report on a study of maternal and infant mortality covering a period of ten years was made by Dr. Viktor Wilson. Because of the marked difficulty in obtaining accurate information, particularly in maternal deaths, the Maternal Welfare Committee has suggested a proposal for a maternal mortality study in the state of Minnesota to be carried out over a two- or three-year period and preferably by an investigator who is an obstetrician, so that accurate information may be obtained. This study is sponsored by the Maternal Welfare Committee and has been approved by the councilors of the Minnesota State Medical Association and is undertaken with the coöperation of the Minnesota State Board of Health. The essential purpose of this study will be to determine accurately the cause or causes of maternal deaths and to provide the medical profession of the state with information useful in protecting the life and health of mothers. It is hoped that the information obtained from this study may serve an educational purpose and that the information so obtained will be considered the joint property of the Minnesota State Medical Association and the State Board of Health.

The new birth certificates have been discussed and studied at some length. The Committee is of the opinion that the birth certificates should follow the United States Census Bureau Standards.

Information is being gathered concerning the advantages of silver acetate over silver nitrate for use in the Crêdé method of preventing ophthalmia neonatorium. Dr. Arthur D. Hirschfelder and the Council on Pharmacy and Chemistry of the American Medical Association are coöperatiing in gathering this information. A further report on this problem will be made later.

RUSSELL J. MOE, M.D., *Chairman*

SUB-COMMITTEE ON FIRST AID AND RED CROSS

On June 4, 1940, the chairman of the Committee on Red Cross and First Aid of the State Medical Association met by appointment with Dr. Harold S. Diehl, Dean of Medical Sciences of the University of Minnesota, and discussed the advisability of teaching First Aid in the medical school.

On June 11 the Dean wrote that the Administrative Committee of the Medical School had authorized a course in First Aid for freshmen medical students during the first quarter that they were enrolled in the medical school.

Two bills were introduced in the legislature, under auspices of the committee, one relating to proper equipment for Ambulance Service for Hire and one to regulate School Bus Service. The first failed to pass but the second had just passed both the House and the Senate as this report was put in the mail. It provides not only for proper First Aid equipment including splints, etc., for school buses but also for the training of drivers in First Aid.

We are making some progress toward having First Aid taught in junior high schools of the state; but we must continue to urge the doctors of the state to teach First Aid.

A. B. STEWART, M.D., *Chairman*

SPEAKERS' BUREAU

No new method of extending information by radio or exhibit or picture can replace the speaker who goes in person to talk before special groups such as women's clubs, PTA's, luncheon clubs, church societies or colleges.

The physician who makes these talks must be well prepared, however. He must know how to present his material simply, understandably and effectively, a quality which is not found in every physician no matter how well qualified he may be otherwise.

The Speakers' Bureau has worked hard during the last few years to assemble a group of such especially qualified speakers and to put them to use.

A considerable number of them have delivered lectures in our successful college lecture courses and have developed, in that most trying of assignments, into exceptionally effective speakers for lay audiences.

Many others are used constantly in connection with the Coordinated Medical and Public Health Program of the association. In response to invitations released each month to the newspapers, speakers are sent to talk to many types of organizations and clubs on the current subject-of-the-month. More than 40 of such talks were given during the past eight months. (No program is offered during the summer months.)

College lectures were offered as usual last fall to each college in the state, two to each college, and 14 of them availed themselves of the opportunity. Subjects were selected from a list of titles concerning which recent University graduates had expressed themselves by questionnaires as lacking in essential information.

F. H. MAGNEY, M.D., *Chairman*

COMMITTEE ON TUBERCULOSIS

NOTE: *Space does not permit publication of the extensive and completely documented report presented by this committee. Copies will be provided on request from the State Office to members who wish to read the report in full.*

A detailed account is given in the report of studies of current medical association effort to control tuberculosis; of previous demonstrations among cattle and in certain sanitorium districts of Minnesota; of standards of procedure adopted by the Committee for tuberculosis work including the tuberculin test types of tuberculin, x-ray films, clinical and laboratory examinations. Historical, geographical and social reasons back of the choice of Meeker County for the demonstration on an area basis of tuberculosis control under sponsorship of the Committee is given, including results of an early study by Lampson in Meeker County and an account of the historic fight for tuberculin testing of cattle made by the farmers of Meeker County which has culminated in the accreditation of every county in the United States.

The preparation for the demonstration is related in the report as follows:

The first meeting of the sub-committee and the physicians in Meeker County was held on November 7, 1940. As far as we know this is the first time that a county medical group has sponsored a complete tuberculosis control program. The various methods of attacking tuberculosis on a county-wide basis were discussed. It was considered that the first object of the county-wide program is to determine by the tuberculin test the incidence of primary tuberculosis at all ages of life. This is the best criterion of the present and future problem. Every person who reacts to the tuberculin test has been exposed either directly or indirectly to a contagious case of tuberculosis and every person who reacts to the test is a potential case of clinical tuberculosis some time in life. The retesting of all non-reactors, as well as the testing of all persons who are born subsequently or who move into the county, should be performed annually.

The second object is to determine who among the tuberculin reactors already has clinical lesions to the extent that they can be located by present methods of examination and to examine all other reactors with sufficient frequency to detect any new lesions which may appear before they have caused much destruction and before the disease has become contagious.

A third objective is to treat or isolate all such cases so as to prevent them from becoming contagious or to prevent the contagious cases from disseminating tubercle bacilli. When this is accomplished there will rarely be a contagious case of tuberculosis among the permanent citizens of the county and, thus, practically all infants will be born and reared in an environment free from tubercle bacilli.

Thus, the citizens of all ages of Meeker County would be divided into two main groups:

1. Non-reactors to tuberculin. 2. Reactors. The reactors would also be divided into two sub-groups: (a) Those who already have demonstrable clinical lesions; (b) All others who are potential cases of clinical tuberculosis.

Record forms have been printed by the State Medical Association, to be filled out in triplicate by the examining physician: One to be filed in the physician's office, another in the Litchfield Hospital, and the third in the office of the Minnesota State Medical Association. A card was also printed to be sent to the heads of households in the county, inviting the family to participate in the tuberculosis control program and to indicate on the return attached card the date when they would report for examination. These cards are to be sent to the heads of households of one township at a time.

The physicians practicing in Meeker County volunteered to administer tuberculin tests to every person in the county and the Minnesota Department of Health agreed to provide them with tuberculin. The physicians also decided that there must be no charge made to anyone for the x-ray film inspection of the chest and that funds must be procured from some other source to provide only for the actual expense of the x-ray film work. Therefore, the physicians, themselves, would derive no financial benefit but they would actually contribute professional work conservatively estimated at $100,000 to $150,000. It is doubtful whether in the history of Minnesota any group has ever manifested a more generous spirit.

It was estimated that approximately 25 per cent of the 20,000 citizens of Meeker County would react to tuberculin and would require x-ray film inspection. Therefore, it became a matter of procuring funds solely for the expense of the material and the exposure and development of the films. The Council of the Minnesota State Medical Association on December 15, 1940, voted $500.00 to the sub-committee to be used in any way it sees fit.

Dr. Karl Anderson, Medical Director of the Northwestern National Life Insurance Company, was invited to attend the committee meeting on March 13 to consider the possibility of suggesting to his company that it provide the funds necessary to cover the expenses of the project. Dr. Anderson presented

this proposition to Mr. Arnold, president of the company, who asked the chairman of the sub-committee, Dr. Stewart, and Mr. Rosell to confer with him. This was done on March 19, 1941. Mr. Arnold was sufficiently interested in the project to submit it to his Board for consideration.

From the outset, it was obvious that the public of Meeker County must be well informed as to the contemplated program.

Arrangements for a county-wide educational campaign were made, consisting of movie films, special programs in the schools, posters to be placed in conspicuous places throughout the county, radio talks, special educational pamphlets from the National Tuberculosis Association, presentations before the 4-H Clubs, the Boy and Girl Scouts, the Parent-Teacher Association, essay contests, frequent newspaper notices, and the development of a special speakers' bureau among the doctors.

At the January 16, 1941, meeting Dr. Lennox Danielson, President of the Meeker County Public Health Association, reported that already Mayor Baumgartner of Litchfield had delivered an address over the Willmar radio station outlining the county plan. Dr. H. E. Wilmot had presented the plan before the nurses of Meeker County; Dr. Lennox Danielson before the county nurse and thirty of her workers; Dr. Julia Danielson before the ministers of Litchfield. At this meeting it was decided that all of the local publicity and educational work should be directed by the Minnesota and Meeker County Public Health Associations and that other publicity should be directed by the Minnesota State Medical Association.

The April 17 meeting was attended not only by physicians but also by leaders of various organizations in Meeker County. Drs. W. A. O'Brien and F. E. Harrington presented splendid addresses on the fundamentals of tuberculosis control and the importance of a systematic program on a county-wide basis. They expressed great confidence in the ability of the physicians practicing in Meeker County to bring tuberculosis to an irreducible minimum in a reasonably short time. This would not only prevent much suffering and mental anguish caused by tuberculosis but it would also definitely reduce the cost of the care of tuberculous patients to the county and the state. All present at this meeting manifested enthusiasm concerning the tuberculosis control program and many expressed a desire to have it begin at the earliest possible moment. It was suggested that a large public meeting be held in the next two or three weeks when as much information as possible concerning the plan would be presented.

The chief problem at the present moment is due to the lack of funds to procure x-ray films. Provision must be made for enough money to defray the expense of materials. It is unreasonable to expect the physicians practicing in Meeker County to provide these materials since they have already volunteered to do all of the work of the entire program on a gratis basis.

J. A. Myers, M.D., *Chairman*

Dr. P. C. Benton, representing Dr. O. J. Seifert, chairman of the Reference Committee on Lay Education, reports: The committee recommends the adoption of all reports of the Committee on Public Health Education with the following comments:

Committee on First Aid and Red Cross—that more emphasis be placed on teaching first aid to doctors; that more emphasis be placed on teaching first aid to medical students; that a more specific program be devised to place the public teaching of first aid into effect.

Committee on Tuberculosis—that the committee continue its work as actively as possible with publicity and tuberculin tests even if funds for all x-rays are not available; that the association owes this committee a vote of thanks for the work already done and that the association continue to support the activity.

Radio committee—that letters of appreciation be sent to Doctor O'Brien, to radio station WCCO and to individual radio station members of the North Central Broadcasting System who have carried Doctor O'Brien's talks; that the radio committee consider further the possibility of making reprints of these talks available to groups interested in Public Health.

Doctor Will then called for further remarks by committee chairmen.

Dr. C. A. Stewart, substituting for Doctor J. A. Myers, chairman of the Committee on Tuberculosis: The new tuberculosis program is progressing and they have made a nice start. They are taking x-ray films already and are engaged in testing the entire population of the county selected. The program will continue over a considerable period and Doctor Myers will make a more complete report to you at some future time.

It was moved, seconded and carried that the recommendations of the Reference Committee on Lay Education reports be accepted.

Doctor Giffin then asked for a confirmatory vote on the distinguished service medal voted by the Council to the late Dr. C. B. Wright. It was moved, seconded and carried that the award be confirmed. Doctor Giffin also informed the delegates that the committee of the Council composed of the last three presidents of the association had recommended that the medal also be given to Dr. C. M. Jackson, for many years professor and head of the Department of Anatomy at the University of Minnesota, and Doctor L. L. Sogge of Windom, chairman of the association's Committee on Public Policy and former president. It was moved, seconded and carried that these medals be awarded, also, at the recommendation of the committee. It was further decided, at the suggestion of Doctor Giffin, that the medals be presented at the banquet to be held on Tuesday night.

Doctor Sogge expressed his appreciation for the honor and asked that Doctor Gullixson of Albert Lea and Doctor Palmer be allowed to present the problem of nursing education in rural hospitals. Doctor Gullixson explained the expanding role of the National League of Nursing Education as dictator of educational policies for all nursing organizations and of the State Board of Nursing Examiners. He charged that it was through the influence of the League and of state directors of nursing education controlled by the League that nurses' training schools had been abandoned in all but four of the smaller communities in the entire state. They remain only in Breckinridge, Faribault, Albert Lea and Red Wing. He said that the standards set by the League and the State Board were not feasible for smaller hospitals but that shortage of well-trained nurses is a serious problem in all rural communities. What these hospitals need and want is adequately trained bedside nurses at a price their patients can afford to pay. They want nurses' training schools for which high school graduates from rural communities can qualify and from which they can graduate with an R.N. degree, nurses who will be satisfied to remain in rural communities.

Doctor Gullixson asked the House of Delegates to authorize the Committee on Public Policy to join with the Minnesota Hospital Association in presenting a bill to the 1943 Legislature, outlining specific duties for the State Board of Nursing Examiners in their relations to the nurses' training schools throughout the state, providing for the highest standards possible for nurses' training compatible with the needs of all communities for nursing services. Already ten states have passed such legislation. The platform of the National League, adopted in 1940, provides that all nursing education shall follow one pattern, namely, two years of college or its equivalent as an entrance requirement and all teaching except in political fields and including basic sciences shall be done by nurses and follow a curriculum imposed by the League. The training school director shall be independent of the hospital conducting the schools and the budget for training must be provided separately and directed exclusively by the director. They advocate, in fact, government aid or a special fund for the purpose and direct that patients shall be cared for by graduate nurses primarily, with pupil nurses required to do only such nursing as may be necessary for educational purposes.

We need in nursing education those who took their training in special schools just as we do in medicine, Doctor Gullixson said, but we do not require that all nurses or all physicians be highly trained specialists. He expressed the hope that the association would aid in keeping Minnesota one green spot in the field of nursing education.

Doctor Sogge said he had with him a paper along the same lines by Doctor Charles Bolsta of Ortonville but would not read it. He suggested that the matter, together with the papers, a resolution and bill on the subject, be presented to the Committee on Resolutions for a report that night or at the session on Monday.

After some discussion it was moved, seconded and carried to refer the matter to the Interprofessional Relationships Committee for report at the Monday session.

Dr. D. P. Head then introduced a resolution from the Hennepin County Medical Society to change the by-laws of the association with reference to affiliate members so that members of the grade of Captain or under in the Army and Lieutenant Commander or under in the Navy, who are called to active duty, may be declared affiliates for the period while they are absent from their home communities and unable to continue their private practice, provided that the component society shall first have declared them affiliate and provided that affiliate membership shall automatically cease upon termination of disability or resumption of practice or return from military service.

The resolution was moved and seconded and extended discussion followed. It was then agreed to refer the matter to the Committee on Resolutions for further study with a view to reporting to the Council and the Delegates at a later time, for possible action, in accordance with the constitutional provision for changing the by-laws, at the next day's session.

Dr. C. L. Roholt of Waverly then outlined a bill which he presented to the Legislature this year providing that indigent emerency patients who are unable to gain immediate admittance to the University Hospital, be cared for in local hospitals with payment to the hospital on the same basis as a payment is now made to the University Hospital and that chronic patients be treated at home hospitals likewise, on the same terms, if they cannot be admitted within ten days to the University Hospital. He said that the bill was dropped when it was discovered that the only funds, earmarked to be paid half by the state and half by the county, are University funds. It is therefore planned, he said, to recast the bill for submission to the next Legislature, asking for a special appropriation earmarked for the purpose.

Dr. F. J. Savage, chairman of the Minnesota Division of the National Physicians' Committee, suggested that the House of Delegates meet with the National Committee at the luncheon of that body scheduled for Monday noon in order to hear John Pratt, executive secretary of the National Physicians' Committee, and other speakers. After some discussion, it was moved, seconded and carried that arrangements be made for the joint luncheon.

Doctor Will then announced appointment of Dr. A. H. Sanford, Dr. A. E. Cardle, and Dr. J. M. Hayes on the Committee on Resolutions and the meeting adjourned until 8:00 p.m.

8:00 P.M. Session

The meeting was called to order at 8:00 p.m. and, having ascertained from Dr. F. J. Lexa, chairman of the Credentials Committee, that a quorum was present, Speaker Will introduced Dr. Jennie Baker (wife of Dr. Norman H. Baker of Fergus Falls), who addressed the delegates as chairman of Health and the Summer Roundup of the Minnesota Congress of Parents and Teachers. Doctor Baker explained the objective of the Summer Roundup as a means of arousing the interest of parents in improving the health of their children, especially those entering school for the first time, and bringing about their continuous medical and dental supervision throughout their school lives. Doctor Baker read the resolution passed by the House of Delegates in 1936, approving the purpose of the Summer Roundup and offering its cordial coöperation to the Minnesota Congress of Parents and Teachers in promoting programs and in working out proper methods of procedure. Since she became chairman of the Summer Roundup, Doctor Baker said, she had been doing everything possible to urge upon mothers the necessity of taking their children to the doctor for a thorough examination. She favored examination of the children in the doctors' offices because it is obviously unfair to ask any doctor to make an adequate examination in a school house with a line up of children waiting for his attention. She said, however, that she has received a considerable number of complaints from mothers that doctors were not taking the examination seriously or giving a sufficiently thorough examination to warrant the effort to have the child examined. "We make no mention of fees because that is not our province," Doctor Baker said. "It is a matter for the doctor to settle with the mother of the child. We find that mothers as a rule are willing to pay but it is a vital part of our general health education effort that the doctor also emphasize the importance of thorough and frequent examinations throughout the child's school life.

"Our sole aim," Doctor Baker said, "is to educate the parents. We have nothing to do with the examination of the child. We want to help the doctor in every way possible and we want you doctors to tell us if you are not satisfied with the way the Summer Roundup is run."

Doctor Baker concluded by asking the delegates to get in touch with her if things were not going smoothly in any of their districts. She promised to do what she could to smooth things out.

Doctor Burns pointed out that in a long-time campaign such as the Summer Roundup effort, interest sometimes wears thin. He suspected that it has in St. Paul and suggested that the motion picture film, "When Bobbie Goes to School," be used generally to stimulate interests in objectives of the work.

Doctor Baker announced that the film was being shown daily at the Auditorium during the meeting and also that of thirty-seven affiliated schools in Saint Paul, thirty-five were signed up to carry on the Summer Roundup camp again this year, representing the best average of any large city in the state.

Doctor Will then asked Doctor Head to present the resolution by the Committee on Resolutions, presented by him at the afternoon session, as it had been rewritten in the interim.

WHEREAS, there exists a national emergency which will require the professional services of many members of the Minnesota State Medical Association in the army, navy, and marine corps of the United States, and

WHEREAS, such service will mean reduced income for many of the physicians serving in these branches and will make the payment of dues to medical organizations an additional burden or even hardship especially for those physicians commissioned in the lower ranks, and

WHEREAS, it is most important that in so far as possible, the membership of this Association be held intact throughout this emergency.

NOW, THEREFORE BE IT RESOLVED, That the House of Delegates of this Association does hereby instruct the Council when formally requested to do so by the proper officers or committee of a component society to waive the State Association dues for such members who are absent from their home community or who are unable to continue their private practice or who hold the rank of captain or below in the Army and Marine Corps or lieutenant commander or below in the Navy to continue thereon the pages as active members of the Association for the duration of the emergency.

Doctor Head moved that the motion made earlier by which men within the qualifications who left their home communities on active military duty were to become affiliate members of the association be withdrawn. It was seconded and carried.

Discussion brought out the fact that a number of societies throughout the state, including Red River Valley, Upper Mississippi, St. Louis, voted to make a special assessment of members to cover dues of men called to active duty; that the Committee on Resolutions and many delegates were opposed to amending the by-laws as proposed in the earlier resolution; that others were opposed to the word "waive" as applied in the second resolution. It was also pointed out that the Council had authority between sessions to determine the method of providing payment of dues for the members in question and to pass upon the eligibility in each case. It was decided to remove the word "waive" and substitute the phrase "provide payment." In that form it was moved, seconded and carried to accept the resolution subject to Council approval at the meeting intervening before the next session of the House of Delegates. Two further resolutions were presented by Dr. A. H. Sanford, chairman of the Committee on Resolutions. The first drawn up by Dr. Paul C. Leck of Austin was as follows:

WHEREAS, the Minnesota State Medical Board of Examiners has during the past two years investigated the practice of medicine by the Fraternal Order of Eagles, and

WHEREAS, through the office of Attorney General J. A. Burnquist, and through the Attorney for the State Board of Medical Examiners, Manley Brist, they have successfully concluded litigations which have effectively terminated the practice of medicine by that lodge, and

WHEREAS, the members of the State Board of Medical Examiners, the Attorney General, J. A. Burnquist, and Attorney Manley Brist, have faithfully carried on their efforts against great opposition until rewarded by the favorable decision of the Supreme Court of the State of Minnesota.

BE IT RESOLVED, That the Medical Association of the State of Minnesota extend to the Minnesota State Board of Medical Examiners collectively and individually, to Attorney General J. A. Burnquist, and to Manley Brist, Attorney, the warmest appreciation and sincere commendation for this splendid accomplishment. As delegate representing the Mower County Medical Society, in behalf of that Society, I do move that this resolution be adopted. (Signed) PAUL C. LECK.

It was moved, seconded and carried that the resolution be adopted.

The second, drawn by the Minnesota Branch of the American Medical Women's Association, was as follows:

WHEREAS, the United States of America is at present engaged in a vast preparedness program which includes the listing of members in the Medical Reserve Corps available for active service, and

WHEREAS, there are approximately 8,000 women physicians and surgeons in the United States who form only a small minority group in the 175,000 physicians, and

WHEREAS, the United States government has taken no cognizance of these women physicians in time of war, except to appoint them as contract surgeons in a few isolated cases, and the status of the contract surgeon is definitely inferior to the status of a man physician in the medical reserve corps on three accounts. First, there is no military ranking, hence curtailment of authority and the necessity of trying to do work under and on those conditions. Second, inferior salaries. Third, no war-time insurance. And

WHEREAS, the women physicians and surgeons of America demonstrated their fitness for war-time service during the first World War when they raised funds, financed units and staff hospitals with well-trained officers in France and Serbia, and did heroic work in the devastated areas, and thereby proved that sex does not count in times of national emergency and national defense, but that ability and skill do, and

WHEREAS, the government has already granted women nurses army rating with proper rank, pay and war-risk insurance and

WHEREAS, the members of the American Medical Women's Association are for the most part members of the American Medical Association, pay the regular dues and enjoy all of the privileges of full membership,

THEREFORE BE IT RESOLVED, That the Minnesota State Medical Society recommend that women physicians and surgeons of America become eligible for the Medical Reserve Corps of the United States Army and Navy, and be granted full privileges, and

BE IT FURTHER RESOLVED, That the Minnesota State Medical Society instruct their delegates for the House of the Delegates of the American Medical Association. That this resolution shall be laid before the House of Delegates of the American Medical Association for their favorable consideration at the annual meeting at Cleveland in June, 1941.

After discussion it was moved, seconded and carried by rising vote to adopt the resolution.

Doctor Sogge then presented the report of the Committee on Public Policy. The report was not recorded and neither were the remarks in comment made by Mr. F. Manley Brist, attorney for the Association.

Considerable discussion by delegates praising the work of the committee followed but was not recorded. It was then moved, seconded and carried that the report be adopted.

Dr. A. W. Adson proposed that the House of Delegates go on record officially as opposed to the type of medical practice by which a physician is hired by a fraternal order to care for members of the order, in which the members are deprived of free choice of physician and the physician is responsible to the order and not to the individuals served.

It was moved, seconded and carried that this was the official attitude of the delegates on this matter.

Dr. E. M. Hammes then gave the report of the Committee on Medical Testimony as follows:

COMMITTEE ON MEDICAL TESTIMONY

In order to conduct a thorough and just investigation when a physician practicing in Minnesota is accused of giving vicious or dishonest medical testimony in any court of this state, several important factors are essential:

1. The judge, or attorney, or accusing physician must submit in writing a brief statement to the Committee, giving the name of the physician who is to be investigated and also the names of the principals of the trial in order that a transcript of the entire testimony can be obtained.

During the past year, four definite and glaring reports of very questionable medical testimony have been submitted unofficially to your chairman by members of the State Medical Association. However, in only one instance was the complaint submitted in writing and this case is in the process of investigation. In the other three cases, a complaint in writing was requested, but refused for various reasons.

2. A transcript of the entire testimony of the case in question must be obtained and placed at the disposal of our Committee. Only by this method will the Committee be able to obtain a true knowledge of all the facts to enable them to arrive at an unbiased and just opinion.

The expense incurred to obtain a transcript of a three (3) day trial in District Court is approximately $100.00. In the Industrial Commission, a similar transcript wil cost about $75.00. The Council of our State Medical Association has approved these expenditures.

3. To assist the Committee on Medical Testimony, members of the State Association in the various specialties must be willing to appear before the Committee when requested to do so and express their opinion regarding the testimony in question.

Your Committee has no disciplinary or judiciary power. If on thorough investigation, the Committee decides that sufficient facts have been presented so that definite action should be brought against the physician accused, all the pertinent facts will be submitted to the State Board of Medical Examiners which has the legal authority to censure or even revoke the medical license.

The Minnesota State Medical Association is the pioneer in this movement of raising the standard of Medical Testimony. Neighboring state medical societies, Wisconsin, Illinois and others are manifesting a definite interest.

We have the full coöperation of the Judges of the Supreme Court, District Court and of the Minnesota State Bar Association.

Your Committee needs your fearless and courageous support.

E. M. HAMMES, *Chairman*

At the request of the Speaker, Doctor Hammes explained that five men in special fields had been asked to assist the Committee in its deliberation; that Justice Stone, to whom he had applied for advice, was of the opinion that complaints might legitimately be made to the Committee by any judge, attorney, physician or even a layman and that the Committee had authority to act on the complaints if, after sufficient investigation, it found sufficient grounds for inquiry. He said the Committee was unwilling to act in any case unless the complaint is made in writing. The Committee is an important one, he said. It is the first and only body of its kind in the United States and it is the hope of all who are interested that it may operate to the improvement of medical testimony in Minnesota. It is realized that to report cases to the Committee may cause considerable embarrassment both to the one who

reports and to the Committee; but it must be done if the work is to have value. It is the hope of everybody that needed investigations may be rare and that a few will suffice to have a satisfactory effect.

Dr. B. S. Adams said that the Minnesota State Bar Association had appointed a committee independently and that the committee, of which Justice Royal A. Stone was a member, was very happy to meet with our committee when they were informed that we had already appointed a group to study the matter. "We have the best possible coöperation, therefore, from the Bench and Bar of the state," he said. "I have known personally of two occasions during the years of my practice when a doctor went out of his way to give testimony favorable to the litigant who was paying his fee. That is a disgrace to the profession and we cannot stand for it. Some ten years ago consideration was given to asking for a change in judicial procedure. We were advised that this is a better way to go about improving the situation but we must have coöperation to get results. The Committee is on the spot; it has a tough job ahead of it but with wholehearted backing it should produce results. The disciplinary powers of the State Board of Medical Examiners are effective. They will operate to curb false medical testimony also if the Committee is permitted to function completely in investigating suspicious cases."

It was moved, seconded and carried to adopt the report.

Doctor Will then called on Dr. J. F. DuBois, secretary of the State Board of Medical Examiners, whose remarks were not recorded.

Discussion on the status of interns in relation to the Medical Practice Act followed.

Speaker Will then called for a report from Dr. A. J. Chesley, secretary and executive officer of the State Board of Health.

Doctor Chesley called attention of the delegates to the position of the State Board of Health with reference to legislation and appropriations and expressed his disappointment that the Legislature failed to pass an appropriation for the research now being carried on by a division of the Board in industrial health. The work has been supported by funds supplied under Title Six of the Social Security Act and will undoubtedly increase in importance with the development of defense industries. He pointed out also the difficulties ahead of the Board in maintaining trained personnel in view of the continuing call to service of reserve medical officers and particularly in the case of industrial health work, in which few in the United States have the qualifications such as those of Doctor Foker, the present head of the Division of Industrial Health, to fit them for this important work. Doctor Foker is a Reserve Officer and subject to call. In any case, the work must go on.

In connection with legislation introduced at the last session of the Legislature, Doctor Chesley expressed his gratification that the bill, designed to further centralize and streamline the state government by abolishing the independent State Board of Health, failed to pass. He recalled that the bill which established the Board in 1872, third in the United States, was passed through the effort of the Minnesota State Medical Association and that the Board had continued in close coöperation with the Medical Association ever since, especially when the Social Security Act was passed and new federal funds became available. The Board then asked that the Council act in an advisory capacity on all new programs thus made possible and this advisory relationship has been continued without interruption.

He commented on two new bills involving the Board in new responsibilities which passed the Legislature. One of them, the licensure of rest homes, goes into effect January 1 and there will be an opportunity to get the assistance of your committee and others to set up the standards and the machinery for putting it into effect.

The other bill requires the Board to license school bus drivers, or some individual who accompanies the driver, as trained in First Aid and also that each school bus or vehicle used to transport children to school have stipulated equipment, including first aid supplies, blankets and splints. The bill was pushed through the Legislature at the last minute and became the law immediately but the difficulties of making it effective are obvious when you consider that there are an estimated 5,000 school busses in the state running all the way from standard busses with two drivers to private drivers taking their own and the neighbors' children to school under a contract arrangement. Also it has been estimated that it will cost as much as $30.00 for equipment for each bus in addition to the license fee and there is the problem of how to keep people who have been awarded a certificate by the Board in First Aid from exceeding their prerogatives and practicing medicine. In that case, you will have people doing things that ought not be done and the result may even be worse than if no first aid were available.

Doctor Chesley said in conclusion it was his opinion that the problems of the past are probably of small consequence compared to the issues which all are going to have to face in the near future. The Board relies on the intelligent coöperation of the Association as never before.

Doctor Will called for the Necrology report and members of the House of Delegates rose in tribute.

After announcements about the luncheon meeting of the delegates and the National Committee on Physicians Monday, the House adjourned until Monday after the luncheon.

Monday P.M. Session

Doctor Will called the meeting to order at 2:00 p.m. and, upon being assured by Dr. F. J. Lexa, chairman of the Credentials Committee, that a quorum was present, asked for the report of Doctor Giffin, chairman of the Council.

DOCTOR GIFFIN: The Council met with and discussed hospitalization problems of joint interest with the Minnesota Hospital Service Association Sunday night and met again in the morning to consider chiefly the report of activities of the National Committee of Physicians and of the A.M.A. trial made by Doctor Braasch. Certain other business was considered however. An official expression of regret at the departure of Doctor C. A. Stewart, Councilor for the Sixth District, who is leaving to assume the chair of Pediatrics at Louisiana State University, was made by the Council with appreciation especially for his great service to the Association as Councilor.

The resolution concerning dues of members called to military duty passed by the House last night and referred to the Council for final action, was discussed and approved with this additional recommendation:

"That no component medical society should be advised to take advantage of the provision for payment of dues out of state funds unless the financial condition of that society should make it imperative. On the other hand, if the local situation should thus make it imperative, the society concerned should feel no hesitancy in making such an appeal to the Council for aid."

The whole question of proper qualifications in cities of the first class for coroner was discussed and has been referred for study to the Committee on State Health Relations and will be reported back to the Council at an early meeting.

It was moved, seconded and carried to accept Doctor Giffin's report.

Doctor Sogge then inquired if there was a report for the delegates on the request for aid in securing passage

of a new bill governing the State Board of Nursing Examiners which had been referred the night before to the Committee on Interprofessional Relationships.

DR. R. G. ALLISON, chairman of the Interprofessional Relationships Committee: Only three members of the Committee have been able to get together on this matter since last night's meeting. We have prepared a statement for the House pointing out that, inasmuch as only a few members were available for consultation and time was short, it seemed inadvisable to make any recommendations at this time on passage of such a bill. It would be the privilege of the Committee, the statement declared, to investigate carefully the merits of the proposed bill and further determine as far as possible, the effect its passage might have on the practice of medicine, the practice of nursing and the welfare of patients involved. Copies of all correspondence involved will be sent to all members of the Committee to enable them to carry on independent studies also. When the investigation is completed, a special meeting will be called and the final report submitted to the delegates at the next meeting.

It was moved and seconded that the report of the Committee be accepted.

Doctor Gullixson spoke to the delegates again on the nursing problem of the smaller hospitals and after considerable discussion the motion to accept the report was carried.

On suggestion of Doctor Adson and others it was also moved, seconded and carried that a joint meeting be called of members of the Interprofessional Relationships Committee, the Minnesota Hospital Association, the Board of Nursing Examiners and leaders of other nursing groups so that all may understand full the problem of supplying nurses for rural needs.

Doctor Will then called on Doctor Giffin to present the proposal to revise the by-laws for the purpose of adjusting the existing committee structure.

Doctor Giffin said that the Council and Reference Committee had approved the suggested changes with one small alteration. The suggested revision provides chiefly for the removal of certain subcommittees from the Committee on Public Health Education and making them separate scientific committees to be appointed, as in the case of other scientific committees, by the president. In detail the changes are as follows:

"Pages 16 and 17, having Committee on Industrial Health deleted; Committee on Fractures made a separate committee. Committee on Asphyxia and Asphyxial Death changed to the Committee on Anesthesia and Asphyxia; Committee on Industrial Hygiene and Occupational Diseases was added; Committee on Public Health Nursing was made a separate committee; Committee on Schools for Laboratory Technicians was deleted. I might say that this Committee had been inactive for a couple of years and is covered by another committee. The Committee on Maternal Welfare was changed to the Committee on Maternal Health. Adding to the Scientific Committees, Tuberculosis, First Aid and Red Cross and Child Health, which were formerly subcommittees of Public Health Education Committee, leaving under the Committee on Public Health Education, the Executive Committee, the Speakers' Bureau the Radio and the Editorial Committee—all relating to the public. The Executive Committee of the Public Health Education Committee would then consist of the Chairmen of the Subcommittees and in addition the Chairmen of all the Scientific Committees so that the Scientific Committees will have contact with the Public Health Education Committee.

"On Page 25, adding the Subcommittee on Sickness Insurance; on Page 26, County Contact Committee had its name changed to County Medical Advisory Committee. The Committee decided that the following committees should be made permanent scientific committees, the new Committee on Medical Testimony, Industrial Hygiene and Occupational Diseases, Vaccination and Immunization. A slight change was made in reading concerning the County Medical Advisory Committee to read as follows:

"'It shall consist of three physicians practicing in the county in which they live and members shall be elected at least annually by the county socities or by members of the profession within the county. Vacancies shall be filled by the Executive Committee of the component society with the advice of the Councilor within the district. Their function shall be to study the medical and health problems so far as they are related to the best interests of the public and coöperate with their component societies and the State Medical Economics Committee and all public agencies in their own county.'

"My suggestion would be that this can be adopted if you so desire with instructions to the Council to complete the necessary re-writing of the by-laws."

Discussion brought out the fact that the old "Contact Committees," so-called, are to be known as "Medical Advisory Committees"; that they are to be elected or appointed in each county, at least annually (so as not to disturb the arrangement in existence in some counties of appointing members to serve alternately for periods of three months). It was also pointed out that in one society it might be necessary to change the name of the society's executive committee, now known as "the medical advisory committee," in order that it may not be confused with the county medical advisory committees.

It was moved, seconded and carried that the report be accepted and that the by-laws be changed as outlined.

Dr. Will then called for a further report of finances from Dr. Giffin.

DR. GIFFIN: Some questions were raised in the discussion of payment of dues for members called to military duty and as to the investment fund of the state association. It seemed to me that the delegates might wish to know the exact status of that fund.

You will be glad to know, I'm sure, that the finances of your organization are in very good condition. The last monies transferred to the Investment Advisory Agency previous to 1938 were transferred in 1928. There was thus a period of ten years when there were no savings sufficient to warrant a transfer. During that time the amount increased by interest from approximately $21,000 to $32,000. In 1937, when the present administrative staff took over, we were in the red to the amount of several thousand dollars. That amount was made up and by 1938 we transferred $4,000 to the Investment Agency Fund; in 1939, we transferred $4,000 and in 1940, $6,000. The amount has thus grown to a cost value of $48,000. The cash market value is in the neighborhood of $45,000. The Agency Account is well invested with only one item, the Nicollet Avenue Properties, which has shown any marked depreciation. We have obtained interest on all our investments. Anyone interested in seeing the details is invited to see the report of the Fiscal Agency Account of our Association, which is managed by the First National Bank and Trust Company of Minneapolis.

Since 1937, when Mr. Rosell and his staff took over management of our Association, it has been possible to pay all expenses of our annual meetings out of exhibit receipts and return various amounts of profit to the General Fund. In other words, the exhibit of each year more than pays for all the expenses of the meeting. Under the present arrangement all administrative work is done in the state office by the regular staff, which is an important element in our savings. We all recognize the efficiency of our full time office staff.

I don't know how our finances will come out this year. It has been an unusually expensive year but it looks as though there would be a slight profit.

I believe that an organization of this sort should have a reserve of at least $100,000. Such a reserve would yield an annual interest of $3,000, something we could count on to finance special projects in our program. Let us keep the Association in good financial condition.

Doctor Will then called for a further report from the Committee on Resolutions. Dr. A. H. Sanford, Chairman.

Doctor Sanford proposed the following resolutions,

all of which were adopted unanimously by the delegates.

Five distinguished out of state speakers have appeared before this convention through the courtesy of the following special societies: Northwestern Pediatric Society, Minnesota Radiological Society, Trudeau Society, the Northern Minnesota Medical Association and the St. Paul Clinical Club.

In sponsoring these speakers the special societies have made an inestimable contribution to our meetings which is gratefully acknowledged by this House. The presence of two other notable guests on this program was made possible by the Great Northern and the Northern Pacific railroads. The appreciation of this House is extended also to the officials of these railroads.

* * *

Most of the credit for the fine arrangements made for this meeting goes to our host Society, the Ramsey County Medical Society, and its active local arrangements committee under the chairmanship of Dr. Francis W. Lynch. To Doctor Lynch and his committee the House of Delegates in session here expresses its warm appreciation for their work.

* * *

The House of Delegates wishes to express its obligation to the Minneapolis, Saint Paul, and Duluth papers, including the *Minneapolis Star Journal*, the *St. Paul Dispatch and Pioneer Press* and the *Duluth Herald and News Tribune* for their excellent reporting of scientific sessions held in connection with the meeting of the Minnesota State Medical Association in St. Paul and for their generous contribution of space to advance announcements. The importance of accurate reporting of medical news is well recognized by the members of this House and the coöperation of these newspapers is thoroughly appreciated.

* * *

Radio time for broadcasts by distinguished guest speakers has been generously provided by WCCO and KSTP and affiliated stations. These broadcasts contributed much to the interest and value of the meeting of the Minnesota State Medical Association in St. Paul and the warm thanks of the House of Delegates to stations WCCO and KSTP and associates is hereby extended.

* * *

WHEREAS, the Minnesota State Board of Medical Examiners has achieved a national reputation and an outstanding record for its conscientious and impartial administration of our medical practice act of Minnesota and

WHEREAS, through its work, the unlicensed quacks and cultists who formerly flourished in Minnesota have been virtually eliminated and

WHEREAS, in so doing, members of the Board have worked closely with the physicians of the state in their joint effort to protect the public health,

BE IT THEREFORE RESOLVED, That the House of Delegates hereby express its appreciation to the Board and its members for their splendid contribution to the public welfare in Minnesota and also for their constant coöperation with the practicing physicians in their joint efforts to protect the public health.

* * *

WHEREAS, the State Board of Health and its staff have continued to work closely with the Minnesota State Medical Association and the physicians of the state in the promotion of joint programs for the public health in this state and

WHEREAS, the interests and standards of medicine have been carefully guarded by responsible officers in all plans for new programs made possible by federal funds and

WHEREAS, the facilities of the Board have been placed at the disposal of the Medical Association especially in the Subject-of-the-Month program of the Association,

BE IT THEREFORE RESOLVED that this House again expresses its appreciation to the Board, to Dr. A. J. Chesley, its executive officer, and to his staff for their aid and coöperation in our work and for their recognized leadership in all departments of public health.

There being no further new business to come before the House, the Speaker then called for election of officers, asking first for nominations for the office of President-elect.

Dr. A. W. Adson then placed in nomination the name of *Dr. H. Z. Giffin* of Rochester for *President-elect*. There being no other nominations, it was moved seconded and carried that the nominations be closed and that the secretary be instructed to cast a unanimous ballot for Doctor Giffin.

At the request of the Speaker, Doctor Giffin expressed his appreciation for the confidence and kindliness of the vote. He said his emotions were a little mixed because this election meant that he would leave the Council and he has enjoyed the association with the Council very much. The Council, he said, is a very remarkable body of men. In his opinion, no finer body exists anywhere for loyalty, honesty and fair judgment. However, he appreciated the honor very much and he will be happy to carry out the wishes of the Council and the House of Delegates to the best of his ability as president of the Association.

Dr. Norman H. Baker of Fergus Falls was then nominated for *First Vice President* and, there being no further nominations, it was moved, seconded and carried that the nominations be closed and that the secretary cast a unanimous ballot for Doctor Baker as First Vice President.

Dr. S. B. Haessly of Faribault was nominated for *Second Vice President* and, there being no further nominations, it was moved, seconded and carried that the nominations be closed and that the secretary cast a unanimous ballot for Doctor Haessly for Second Vice President.

Dr. B. B. Souster of Saint Paul was nominated to succeed himself as *Secretary*. There being no further nominations, it was moved, seconded and carried that the nominations be closed and that the executive secretary be instructed to cast a unanimous ballot for Doctor Souster as Secretary.

Dr. W. H. Condit of Minneapolis was nominated to succeed himself as *Treasurer* and, there being no further nominations, it was moved, seconded and carried that the nominations be closed and that the secretary be instructed to cast a unanimous ballot for Doctor Condit as Treasurer.

Dr. W. W. Will of Bertha was nominated to succeed himself as *Speaker* of the House of Delegates. (Dr. E. A. Meyerding of Saint Paul, vice speaker of the House, assumed the chair.) There being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous ballot for Doctor Will as Speaker of the House of Delegates. (Doctor Will then resumed the chair.)

Dr. E. A. Meyerding was nominated as *Vice Speaker* of the House and, there being no further nominations, it was moved, seconded, and carried that the secretary be instructed to cast a unanimous ballot for Doctor Meyerding as Vice Speaker of the House.

Doctor Will then called for nominations for Councilors to fill offices of Councilors whose terms expired.

Dr. L. A. Buie of Rochester was nominated to succeed Doctor Giffin as *Councilor of the First District* and, there being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous ballot for Doctor Buie as Councilor of the First District.

Dr. L. L. Sogge of Windom was nominated to succeed himself as *Councilor of the Second District* and, there being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous ballot for Doctor Sogge as Councilor of the Second District.

Dr. F. J. Elias of Duluth was nominated to succeed himself as *Councilor of the Ninth District*. There being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous vote for Doctor Elias as Councilor of the Ninth District.

Dr. S. H. Baxter of Minneapolis was nominated to fill out the unexpired term of Dr. C. A. Stewart, who resigned as *Councilor of the Sixth District* to go to the University of Louisiana. There being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous ballot for Doctor Baxter as Councilor of the Sixth District.

Doctor Will then presented the nomination by the Council of *Dr. F. J. Savage* of St. Paul to succeed himself as *delegate to the American Medical Association*. There being no further nominations, it was moved, seconded and carried that the secretary be instructed

to cast a unanimous ballot for Doctor Savage as delegate to the American Medical Association. The nomination by the Council of *Dr. George Earl* of St. Paul as *alternate* to Doctor Savage was presented to the House and, there being no further nominations, it was moved, seconded and carried that a unanimous ballot be cast for Doctor Earl as alternate to Doctor Savage.

The nomination by the Council of *Dr. A. W. Adson* of Rochester as *delegate to the American Medical Association* to fill out the unexpired term of Dr. W. F. Braasch of Rochester, recently appointed as trustee to the American Medical Association, was presented to the House. There being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous ballot for Doctor Adson as delegate, in the place of Doctor Braasch, to the American Medical Association.

The nomination by the Council of *Dr. J. M. Hayes* of Minneapolis to the office of *additional delegate,* made possible by reapportionment of delegates from the American Medical Association, was presented to the House. There being no further nominations, it was moved, seconded and carried that the nominations be closed and that the secretary be instructed to cast a unanimous ballot for Doctor Hayes as delegate to the American Medical Association.

Nomination by the Council of *Dr. W. W. Will* as *alternate* to Doctor Hayes was presented to the House. (Doctor Meyerding assumed the chair.) There being no further nominations, it was moved, seconded and carried that the secretary be instructed to cast a unanimous ballot for Doctor Will as alternate to Dr. Hayes. (Doctor Will resumed the chair.)

Doctor Will then called for suggestions as to the place for the 1942 Annual Meeting.

Dr. L. A. Barney of Duluth, on behalf of the St. Louis County Medical Society, invited the association to meet in Duluth in 1942. It was moved, seconded and carried that the invitation be accepted.

DOCTOR WILL: There has been a suggestion that the end of May is sometimes a difficult time for the meeting, inasmuch as many fathers wish to attend graduation exercises at that time. I believe the date in Duluth will be later in the summer so as to be sure of warm weather and that will take care of the matter for 1942.

Doctor Will announced the entertainment at which members were to be guests of the Ramsey County Medical Society and the Minnesota State Medical Association at the Auditorium in the evening and asked for further business before adjournment.

Doctor Giffin asked for a vote of thanks to the administrative staff for their work of the last few years.

It was moved, seconded and carried that a rising vote of thanks be given to the staff for its work.

DR. HAYES: I don't believe the meeting should adjourn without saying something about the work of the National Committee of Physicians. As representative of Dr. Savage, state chairman, who is attending another meeting, I want to move that every county or component society appoint a chairman to take charge of the work of the committee so that we can keep up the enthusiasm aroused at the luncheon meeting today.

The motion was seconded and delegates from St. Louis County, Red River Valley, Renville, Clay-Becker and other societies reported contributions from members or the society as a whole to the work.

Dr. Will said that without question the committee is doing a most valuable work and if it costs a little money, it should be the duty of all members to give the money and keep enthusiasm alive for the movement.

The motion was carried and the meeting adjourned.

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" " "

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OF GENERAL INTEREST

Dr. Edward J. Harri has become associated in practice with Dr. John K. Butler at Carlton.

* * *

Dr. Lawrence J. Kaasa of Albert Lea was recently appointed a member of the board of the Mineral Springs Sanatorium.

* * *

Dr. Ralph K. Ghormley of Rochester was elected president of the Clinical Orthopædic Society at a recent meeting in Akron and Cleveland.

* * *

A continuation course in medical technology was presented at the University of Minnesota Center for Continuation Study, October 20, 21 and 22.

* * *

Dr. Wallace H. Cole of Saint Paul discussed "Some Recent Medical and Surgical Experiences in England" before the Chicago Orthopedic Society, October 10.

* * *

Dr. Stuart D. Whetstone, who has been practicing in Owatonna since last March, has moved his family to Cut Bank, Montana, where he will resume his practice of medicine.

Dr. W. P. Olson, who has been in Los Angeles, arrived in Gaylord recently to assist his son, Dr. D. C. Olson at the Gaylord hospital.

* * *

Dr. Miland E. Knapp of Minneapolis was elected second vice president of the American Congress of Physical Therapy at the annual meeting in Washington, D. C., September 1-5.

* * *

At the twenty-fourth annual meeting of the American Dietetic Association held in St. Louis, October 20-23, Dr. Russell M. Wilder of Rochester spoke on "Nutrition and National Defense."

* * *

Among those recently issued appointments by the Navy Department as Assistant Surgeons in the Navy with the rank of lieutenant (junior grade) are: Drs. Robert D. Blomberg, Andrew E. Morrison and Robert W. Wheeler of Minneapolis.

* * *

Dr. Paul M. Gamble of Albert Lea is doing graduate work in surgery at the New York Polyclinic Medical School and Hospital in New York City. He began his

work there about October 1 and expects to remain there three months.

* * *

The marriage of Dr. Arthur J. Moss of Minneapolis and Miss Alice Litman of Saint Paul took place October 19. Both are graduates of the University of Minnesota, where Dr. Moss was affiliated with Phi Delta Epsilon, professional medical fraternity.

* * *

Dr. Stanley J. Smith, a member of the More Hospital staff in Eveleth since 1937, has moved his family to Belvidere, Illinois, where he has entered private practice. Dr. Smith was honored at a farewell party by the Eveleth Elks lodge, September 27.

* * *

Included on the program for the fifty-second annual meeting of the Association of Life Insurance Medical Directors of America, held in New York, October 23-24, was Dr. Edgar V. Allen of Rochester, whose subject was "Peripheral Arterial Diseases."

* * *

Dr. J. L. McKelvey, head of the department of obstetrics and gynecology at the University of Minnesota medical school, will address a meeting of the Southern Medical Association to be held in St. Louis, Missouri, November 11-14.

* * *

Dr. Edith Boyd has resigned her position as assistant professor of anatomy and child welfare at the University of Minnesota to go to White Fish, Montana, to become director of the general hospital there. She assumed her new duties, October 15.

* * *

Among the speakers for a course of postgraduate lectures on geriatrics to be given at Marquette University school of medicine this month under the sponsorship of the Medical Society of Milwaukee County is Dr. Oscar T. Clagett of Rochester. His topic is "Treatment of the Aged from the Surgical Angle."

* * *

Captain Henry B. Clark, Jr. (Saint Paul) was recently appointed to take charge of faciomaxillary surgery at Camp J. T. Robinson, Arkansas, where he has been on active duty since December 12, 1940. More recently his term of active duty has been extended to December 12, 1942.

* * *

Dr. W. J. Marcley is acting as temporary consultant in the tuberculosis work of the Minnesota State Board of Health during the absence of Dr. Hilbert Mark, who was called to active service with the United States Army in August. Dr. Mark, who holds the rank of major, is stationed at Camp Grant.

* * *

Dr. Jay Arthur Myers of Minneapolis delivered the George C. Rowell Memorial Address at a dinner meeting in Beckley, West Virginia, which was part of a joint meeting of the sixth councilor district of the West Virginia Medical Association and the West Vir-

ginia Tuberculosis and Health Association, September 17-18.

* * *

Dr. and Mrs. Hjalmar Mortensbak and son of Hanska moved recently to Minneapolis, where Dr. Mortensbak has become associated with General Hospital as a resident in surgery. A graduate of the University of Minnesota Medical School, '34, Dr. Mortensbak interned at General Hospital and then went to Hanska to practice.

* * *

The Mayo Foundation announces that a series of lectures, demonstrations and clinics by members of the faculty and invited guests will be held in Rochester during the week of November 10. Problems related to medical and surgical emergencies encountered in civilian and military practice will be emphasized. Physicians are invited to attend.

* * *

Dr. Arthur Neumaier has opened offices in Glencoe, Minnesota. A graduate of Duke University medical school, he interned in children's diseases at the University of Chicago Clinics and at St. Mary's Hospital in Duluth. For the past three and a half years, he has practiced at Lindstrom. He recently was released from active duty with the United States Army medical corps.

* * *

Two members of the University of Minnesota medical staff have recently published books.

Dr. Wesley W. Spink, associate professor in medicine, is the author of "Sulfanilamide and Related Compounds in General Practice," while Dr. Wallace P. Ritchie, clinical assistant professor of surgery, has written a book entitled, "Essentials of General Surgery."

* * *

Dr. Oscar T. Heyerman has become associated with the Warren Clinic in Warren. He replaces Dr. John D. Barker, who has been called to service in the medical corps of the United States Army. Dr. Heyerman is a graduate of the University medical school. He served his internship at Ancker Hospital, and for several months past was a resident at Northwestern Hospital in Minneapolis.

* * *

A paper will be presented at the Central Society for Clinical Research, which meets in Chicago, November 7-8, by Dr. Wesley W. Spink, associate professor of medicine at the University of Minnesota Medical School. His subject will be "The Coagulase Test for Staphylococci and its Correlation with the Resistance of the Organisms to the Bactericidal Action of Human Blood; Clinical and Immunological Significance."

* * *

Drs. Russell O. Spittler and T. J. Bloedel have announced their association in the practice of medicine and surgery at New Richland, Minnesota. Dr. Spittler has been practicing in New Richland since January, 1940, and Dr. Bloedel came to New Richland in May, 1941, to take over Dr. Spittler's practice during the latter's

service with the army. Dr. Spittler, however, was released from service.

* * *

Dr. John C. Poore of Saint Paul has taken over the practice of Dr. Donald Brink at Isle. Dr. and Mrs. Brink and their son left recently for New York City where Dr. Brink will study at the New York Polyclinic Medical School and Hospital.

Dr. Poore, who is a graduate of the University of Minnesota School of Medicine, was lately in practice in Nevada.

* * *

Dr. William H. Haines, a graduate of the University of Minnesota medical school, Class of 1932, has been appointed director of the Behavior Clinic of the Criminal Court of Cook County in Chicago, Illinois. This clinic passes on the sanity of prisoners brought up for trial before the Criminal Court. Dr. Haines also is assistant professor of neurology at Rush Medical College.

* * *

Speakers at the eleventh annual conference of the Oklahoma City Clinical Society held October 27-30 at Oklahoma City included Dr. Gilbert J. Thomas, clinical associate professor of urology at the University of Minnesota medical school and clinical professor of surgery at the graduate school; Dr. Walter C. Alvarez of Rochester; and Dr. Fred W. Rankin of Lexington, Kentucky, formerly of Rochester, president-elect of the American Medical Association.

Appearing on the program for the meeting of the tenth district of the State Medical Society of Wisconsin at Eau Claire, September 25, were: Dr. Cecil J. Watson of Minneapolis, whose subject was "Uremia"; Dr. Ernest M. Hammes, Saint Paul, "Diagnosis of Spinal Cord Diseases"; and Dr. Albert M. Snell, Rochester, "Portal Cirrhosis." Dr. Watson also conducted a clinic, and Dr. Hammes gave a dinner address, "Believe It or Not in Medicine."

* * *

Dr. W. A. O'Brien, director of postgraduate education at the University of Minnesota medical school, addressed members of the Elk River Chamber of Commerce, October 16, on the subject of pasteurized milk. The program was arranged by Dr. Arthur B. Roehlke and Dr. Gordon H. Tesch of Elk River.

The meeting was part of a campaign relating to pasteurization of milk, which is being sponsored by the East Central Minnesota Medical Society.

* * *

Married in Minneapolis, October 18, were Dr. Hanns C. Schwyzer, son of Dr. and Mrs. Arnold Schwyzer of Saint Paul, and Miss Margaret Nelsen, daughter of Mr. and Mrs. N. G. Nelsen of Minneapolis.

Ushers included Dr. Charles Rea and Dr. Arnold Schwyzer of Saint Paul.

Dr. and Mrs. Schwyzer are at home at Pippens Place, a lodge in the Ozarks. Dr. Schwyzer, a lieutenant in the army medical corps, is stationed at Fort Leonard Wood, Missouri.

On the program of the thirteenth annual meeting of the Aero Medical Association of the United States in Boston, October 31-November 2, were Drs. William R. Lovelace, II, and Jan H. Tillisch of Rochester, whose paper was entitled, "The Physical Maintenance of Transport Pilots."

Dr. Albert J. Herbolsheimer, assistant chief of the medical section of the Civil Aeronautics Administration, Washington, D. C., participated in a forum on civil aeronautics. Dr. Herbolsheimer was formerly of Minneapolis.

* * *

Guest speakers on the program for the course in radiology of the chest given at the Center for Continuation Study on the University of Minnesota campus, November 3, 4 and 5 included Dr. Fred J. Hodges, head of the department of roentgenology at the University of Michigan; Dr. Carl C. Birkelo, roentgenologist at Herman Kiefer Hospital and William H. Maybury Sanitarium in Detroit, Michigan; Dr. Wendell G. Scott of the department of roentgenology at Washington University, St. Louis; and Dr. S. Reid Warren, Jr., Moore School of Engineering, X-ray Laboratory, University of Pennsylvania, Philadelphia.

* * *

Four important national defense research projects are under way in the University of Minnesota Medical School, Dr. Harold Diehl, dean of the school, reports.

The investigations include a study of nutrition and diets for soldiers being made by Dr. Ancel Keys, university physiologist, who is helping the Army develop new rations; research into the effects of low oxygen pressure on the heart—of military significance from an aviation standpoint; study of the concentration and preservation of blood serum as well as work on finding blood substitutes; and investigation into the effects of poisonous gases on pulmonary physiology.

* * *

Guest speakers at the ninth annual assembly of the Omaha Mid-West Clinical Society in Omaha, October 27-31, included: Dr. John L. McKelvey, Minneapolis, "Etiology and Treatment of Premature Separation of Normally Implanted Placenta," also "Arteriosclerotic Toxemia of Pregnancy"; Dr. Albert M. Snell, Rochester, "Recent Advances in Vitamin Therapy," also "Supposedly Rare Conditions Producing Abdominal Pain"; and Dr. Byrl R. Kirklin, Rochester, "Early Manifestations of Gastro-intestinal Cancer."

Dr. Kirklin also took part in a symposium on radiologic diagnosis, as did Dr. Leo G. Rigler of Minneapolis.

* * *

The twenty-first anniversary of the founding of the Northwestern Clinic in Crookston was marked by a dinner for members of the staff, October 11.

The clinic opened its doors October 10, 1920, with a staff of three members, Dr. M. O. Oppegaard, Dr. C. D. Mitchell and the late Dr. O. E. Locken. Dr. C. L. Oppegaard joined the staff in 1924; Dr. L. L. Brown in 1926; Dr. W. F. Mercil in 1928; Dr. C. G.

Uhley and Dr. R. O. Sather in 1937, and Dr. R. S. Derifield in 1941. Dr. Sather is now active in military service as a major in the medical corps at William Beaumont general hospital in El Paso, Texas.

A new addition to the clinic building, which will double its facilities, is now under construction.

* * *

Dr. Herman E. Hilleboe of Saint Paul, chief of the medical unit of Minnesota's Division of Social Welfare, presented a paper, "Tuberculosis Among Mentally Ill Patients" at the annual convention of the American Public Health Association in Atlantic City, New Jersey, held there October 11-17.

Representing the University of Minnesota medical school at the meeting were Dr. Gaylord W. Anderson and Dr. Ruth E. Boynton; while Dr. A. J. Chesley and Dr. R. N. Barr represented the Minnesota State Board of Health. Dr. Anderson was named vice chairman of the epidemiology section, and Miss Laura A. Draper, director of Minneapolis Community Health Service, chairman of the public health nursing section.

* * *

Former interns and fellows in pediatrics at the University Hospitals held a reunion, their first, on the University of Minnesota campus, October 17-18.

Dr. Willis H. Thompson of Minneapolis was named chairman of a permanent committee to plan future reunions.

Among those from outside the Twin Cities who attended were: Drs. Paul Bancroft and R. R. Remboldt, Lincoln, Nebraska; Dr. George B. Logan, Rochester; Dr. R. E. Dyson, Minot, North Dakota; Dr. Ralph Rossen, Hastings, Minnesota; Dr. George Kimmel, Red Wing; Dr. Nere Sundet, Kadoka, South Dakota; Dr. Floyd Thompson and Dr. Everett Perlman, both stationed at Pine Camp, Watertown, New York; and Dr. John Lohmann, Jasper, Minnesota.

* * *

The following medical reserve officers have been relieved from active duty with the United States Army:

Dr. Daniel Louis Fink, Minneapolis, first lieutenant, who was assigned to the Corps Area Service Command Station Hospital in Fort F. E. Warren, Wyoming.

Dr. Arnold Joseph Chlad, Saint Paul, first lieutenant, who was assigned to Fort Snelling.

Dr. Daniel James Moos, Minneapolis, first lieutenant, assigned to Fort Snelling.

Dr. Harlan Lamar Word, Saint Paul, first lieutenant, assigned to Fort Snelling.

Orders for the following medical reserve officers have been revoked:

Dr. John Ambrusko, Rochester, first lieutenant, who was assigned to the Basic Flying School (nonflying status), Taft, California.

Dr. Robert Dulaney Moreton, Rochester, first lieutenant, who was assigned to the Corps Area Service Command Station Hospital, Fort Leonard Wood, Missouri.

* * *

Medical reserve corps officers ordered to extended active duty with the United States Army include:

Irving Joseph Farsht, Minneapolis, captain, to Corps Area Service Command Station Hospital, Fort Bliss, Texas.

William Alfred Swedburg, Duluth, first lieutenant, to Corps Area Service Command Station Hospital, Fort Riley, Kansas.

Bruce M. Anderson, Rochester, first lieutenant, Corps Area Service Command Station Hospital, Camp J. T. Robinson, Arkansas.

John Munroe Douglas, Rochester, first lieutenant, Corps Area Service Command Engineer Replacement Center Infirmary, Fort Leonard Wood, Missouri.
Alister Ian Finlayson, Rochester, first lieutenant, Corps Area Service Command Induction Station, Fort Crook, Nebraska.
Forrest Ivan Rose, Saint Paul, first lieutenant, Corps Area Service Command Station Hospital, Camp J. T. Robinson, Arkansas.
William Hildebrand Wilson, Rochester, first lieutenant, Corps Area Service Command Station Hospital, Fort F. E. Warren, Wyoming.
Norman Russell Beck, Rochester, first lieutenant.
William Vincent Leary, Rochester, first lieutenant.
Walter Russell Nickel, Rochester, first lieutenant.
Benjamin B. Wells, Rochester, first lieutenant.

* * *

This territory had a generous representation at the meeting of the Central Association of Obstetricians and Gynecologists held at New Orleans, October 2-4.

Among those attending were Dr. John H. Moore of Grand Forks; Dr. J. W. McGill of Superior; Drs. James R. Manley, Russell Moe and E. T. Martin of Duluth; Dr. and Mrs. J. C. Litzenberg, Dr. Harold Leland, Dr. Leonard A. Lang, Dr. T. W. Weum, Dr. John A. Haugen, Dr. Nora Winther, and Dr. Paul Larson of Minneapolis; Drs. Virgil Counseller, Lawrence M. Randall and Arthur Hunt of Rochester; Drs. Roger Countryman, E. C. Hartley and A. G. Schulze of Saint Paul; and Dr. D. E. Moorehead of Owatonna.

Dr. Litzenberg discussed a paper and also presented a radio lecture.

Papers by Minnesota men included, "Diaphragmatic Hernia in the Newborn," by Drs. John A. Haugen and Claude J. Ehrenberg of Minneapolis; and "Uterine Bleeding Due to Benign Lesions" by Drs. Lawrence M. Randall, S. B. Lovelady and Fletcher S. Sluder, Jr., of Rochester.

* * *

Taking part in the annual clinical program and meeting of the Minnesota Medical Alumni Association held in the University Hospitals, Minneapolis, October 31, the day before Homecoming were: Dr. Wesley W. Spink, Minneapolis, "Sulfonamide Therapy"; Dr. Lawrence R. Boies, Minneapolis, "Hearing Loss in Childhood"; Dr. Lloyd H. Ziegler, Wauwatosa, Wisconsin, "Reactions of Psychotic Individuals to Surgery"; Dr. Harry W. Christianson, Minneapolis, "Anorectal Diseases"; Dr. Miland E. Knapp, Minneapolis, "Physical Therapy of Fractures"; and Dr. Erling S. Platou, Minneapolis, "Human Serum Therapy."

Dr. Wallace H. Cole of Saint Paul addressed the luncheon meeting in Coffman Memorial Union on the subject, "Recent Experiences in England."

The Class of 1921 celebrated its twentieth anniversary at this time.

The committee arranging the clinical program was composed of Drs. Horace G. Scott, chairman; Dr. Harold F. Buchstein and Dr. L. Haynes Fowler of Minneapolis, and Dr. John Richards Aurelius of Saint Paul.

* * *

Speakers at the forty-sixth annual meeting of the American Academy of Ophthalmology and Otolaryngology in Chicago, October 19-23, included Dr. Alfred W. Adson of Rochester, whose subject was "Surgical

Treatment of Vascular Diseases Altering the Functions of the Eye."

Dr. Adson and Dr. W. L. Benedict of Rochester also presented a motion picture, "Arteriovenous Fistula Between the Internal Carotid Artery and the Cavernous Sinus." Another motion picture, "Treatment of Traumatic Injuries of the Face," was presented by Drs. Gordon B. New and John B. Erich of Rochester.

Dr. Frank E. Burch of Saint Paul presented two motion pictures entitled, "A Muscle Recession Method," and "The Lundsgaard Iris Inclusion Technique and Bentzen's Method of Trephining for Glaucoma."

Dr. Hendrie W. Grant of Saint Paul was discusser of a paper, "Operative Results in Two Hundred and Eleven Cases of Convergent Strabismus," given by Drs. John H. Dunnington and Maynard Wheeler of New York.

Members of the Association's Board of Secretaries include Dr. Erling W. Hansen of Minneapolis, secretary for public relations, and Dr. Benedict, secretary for ophthalmology.

Dr. Fred J. Pratt of Minneapolis holds a life membership in the Association, while Dr. H. E. Binger of Saint Paul holds a senior membership.

The following 1941 candidates have been certified by boards: Drs. Arthur V. Garlock of Bemidji, Malcolm R. Johnson of Red Wing, Archie Olson of Duluth, Robert R. Tracht of Saint Paul.

BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

BOOKS RECEIVED FOR REVIEW

PROFESSIONAL ADJUSTMENTS. I. Gene Harrison, A.B., R.N. Educational Director, Druid City Hospital School of Nursing, Tuscaloosa, Alabama. 204 pages. Price, $2.25, cloth. St. Louis: C. V. Mosby Co., 1941.

WOUNDS AND FRACTURES. A Clinical Giude to Civil and Military Practice. H. Winnett Orr, M.D., F.A.C.S. Chief Surgeon, Nebraska Orthopedic Hospital, Fellow of the American College of Surgeons, Member International Society of Orthopedic Surgery, etc. 227 pages. Illus. Price, $5.00, cloth. Springfield, Ill.: Charles C. Thomas, 1941.

SHOCK TREATMENT IN PSYCHIATRY. A Manual. Lucie Jessner, M.D., Ph.D. Resident Psychiatrist, Baldpate, Georgetown, Mass.; Graduate Assistant in Psychiatry, Massachusetts General Hospital; Assistant in Psychiatry, Beth Israel Hospital, Boston; and V. Gerard Ryan, M.D., Associate Psychiatrist, Elmcrest Manor, Portland, Conn.; Assistant in Psychiatry, Harvard Medical School. Introduction by Harry C. Solomon, M.D., Clinical Professor of Psychiatry, Harvard Medical School, Chief of Therapeutic Research, Boston Psychopathic Hospital. 149 pages. Price, $3.50, cloth. New York: Grune & Stratton, 1941.

IMMUNITY AGAINST ANIMAL PARASITES. James T. Culbertson, Assistant Professor of Bacteriology, College of Physicians and Surgeons, Columbia University. 274 pages. Price, $3.50, cloth. New York: Columbia University Press, 1941.

✶ CLASSIFIED ADVERTISING ✶

PHYSICIAN WANTED—Thriving northwestern Minnesota town of 1,000. Rich surrounding community and large territory. Office space free. Excellent opportunity. Address C-102, care MINNESOTA MEDICINE.

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POSITION WANTED—As assistant in doctor's office, preferably Minneapolis. Nurses training. Typing and shorthand. Will take laboratory training if required. Address C-105, care MINNESOTA MEDICINE.

CLINICAL PHOTOGRAPHY, Lantern Slides and Photomicrography. Photographs and X-rays reduced or enlarged for manuscripts. SCIENTIFIC PHOTOGRAPHIC LABORATORY, 348 Hamm Bldg., Saint Paul, Minnesota. Telephone CEdar 7125.

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YOUNG PHYSICIAN WANTED—Thriving South Dakota town of 1,250. County seat in good farming community. Hospitals within thirty miles. Two railroads, excellent schools, churches. No competition. Address C-100, care MINNESOTA MEDICINE.

SYNOPSIS OF THE PREPARATION AND AFTERCARE OF SURGICAL PATIENTS. Hugh C. Ilgenfritz, A.B., M.D. Instructor in Surgery, Louisiana State University School of Medicine; Visiting Surgeon, Charity Hospital of Louisiana at New Orleans; and Rawley M. Penick, Jr., Ph.B., M.D., F.A.C.S. Professor of Clinical Surgery, Louisiana State University School of Medicine; Visiting Surgeon, Charity Hospital of Louisiana at New Orleans. Foreword by Urban Maes, M.D., D.Sc., F.A.C.S. Professor of Surgery and Director of the Department, Louisiana State University School of Medicine; Senior Visiting Surgeon, Charity Hospital of Louisiana at New Orleans; Consulting Surgeon, Touro Infirmary. 532 pages. Illus. Price, $5.00, flexible binding. St. Louis: C. V. Mosby Co., 1941.

THE ART AND SCIENCE OF NUTRITION. A Textbook on the Theory and Application of Nutrition. Estelle E. Hawley, Ph.D., and Grace Carden, B.S. University of Rochester, School of Medicine and Dentistry, Rochester, N. Y. 619 pages. Illus. Price, $3.50, cloth. St. Louis: C. V. Mosby Co., 1941.

THE MASK OF SANITY: AN ATTEMPT TO REINTERPRET THE SO-CALLED PSYCHOPATHIC PERSONALITY. By Hervey Cleckley, B.S., B.A., M.D., Professor of Neuropsychiatry, University of Georgia School of Medicine, Augusta. Cloth. Price $3. Pp. 298. St. Louis: C. V. Mosby Company, 1941.

This is an interesting monograph dealing with those individuals whose deviations of personality and behavior abnormalities have long perplexed the psychiatric world, and still remain puzzling problems. The author reviews the subject in a general way, and then sets forth his own ideas and conclusions, pointing out that there are large numbers of persons in every community belonging to this group who are irresponsible and consistently fail to carry out any normal pattern of life. These failures result in disasters to themselves and misery and despair, persistently, to their families. There is great need for a better understanding of these serious personality derangements, in order that they may be frankly recognized, and in order that medical efforts to treat and protect them, may progress.

Cleckley believes that this group is especially difficult to deal with because, unlike all the other serious personality disturbances, a mask of perfect sanity conceals the real inward state of all persons disordered in this manner. This mask deceives the community, the law courts, and, all too frequently, even the physicians who try to understand and help them. Existing opinions regarding this group are summarized. It is carefully differentiated from other entities, and the clinical syndrome is clearly outlined. Fifteen case histories are presented. An attempt is made to interpret the clinical process and therapy is discussed. There are places in this book in which it is felt that the author pays too much attention to the literary style, rather than the actual subject matter at hand, but in general it is a worthwhile contribution. It is recommended to those interested in psychiatry and personality studies.

L. R. GOWAN, M.D.